



## INSIDE DOPE

by GEORGE F. TAUBENECK

### Story of the Week

**America Needs More Steel  
Capacity—And Right Away, Too**  
**Substitutes for Steel**  
**Standardization and  
Simplification**  
**Good Red Meat**  
**When You Have Orders to Burn**  
**Now Is the Time to Make Friends**

### Story of the Week

Herman Spoehrer is one of those gents who is all wrapped up in barber shop quartetting (and there ought to be such a word, anyway, if you can't find it in the dictionary). Herman has a resonant bass voice which the Metropolitan Opera manager should hear.

As his most profound experience to date, however, he tells of the evening when he found himself quartetless at one of those Afterglow parties that spring into unexpected song in room after room of a hotel during a convention.

But Herman was not disheartened. As he wandered around, he picked up a willing high-toned tenor. And the two of them pretty soon shanghaied a passable second tenor.

All they needed was a baritone, and upon him they stumbled, right in the hotel lobby.

In no time at all, they decided here was the baritone supreme.

Finally Mr. Spoehrer enthused: "Hey, you got it, you're good. What's your name?"

"Perry Como," he answered amiably.

### America Needs More Steel Capacity— And Right Away, Too

Air conditioning, electric appliance, and refrigeration manufacturers today are finding it more and more difficult to get supplies of sheet steel because sometime ago their suppliers won an argument.

The question was: Will there be enough steel, aluminum, copper, etc. to supply America's needs and requirements? Suppliers went out on a limb and answered: Yes.

Today's events are proving them wrong, tragically wrong.

There may be some excuse for their bad estimates in the fact that few, if any, prognosticators knew just how tremendous our postwar boom would become.

It is also true, however, that our nation's steel makers hogishly have been refusing to expand their production facilities because they don't want to be left with burdensome excess capacity come the next Depression (presuming, of course, that one is coming some day in the future).

These steel makers, it seems to us, are being unbelievably short-sighted. They're consulting the wrong astrologers. If they don't expand their capacity now, steel makers may have even greater overcapacity in 1952 or 1955 than they will have if they just let matters ride.

This seeming paradox is accounted for by the fact that electric appliance, refrigeration and air conditioning manufacturers—yes, and the automobile makers, too—won't take steel shortages lying down.

They aren't going to close their doors and go fishing just because their suppliers made some bum guesses in 1946 and 1947. They will find substitutes for sheet steel. As a matter of fact, they are finding them—aluminum, for example.

Result: some of steel's markets may be lost forever.

### Substitutes for Steel

The substitutes they are sure to find for steels and other scarce metals  
(Continued on Page 8, Column 3)

## Little New For Cooling Field at New York Show

NEW YORK CITY—No startling new products in the air conditioning field, with the possible exception of a heat pump unit which had already been publicly introduced at the refrigeration show in Cleveland the previous week, were in evidence at the eighth annual Heating, Ventilating & Air Conditioning Exposition here last week.

Some 300 exhibits, largely devoted to heating and ventilating, were "stacked four high" on the four floors of Grand Central Palace here.

The show was sponsored by the American Society of Heating & Ventilating Engineers, which held its fifty-fourth annual meeting concurrently with the exposition.

Although the crowds were limited on opening day, Monday, attendance picked up greatly on Tuesday and the balance of the week. Show officials, however, would not make any estimate as to attendance figures.

A number of exhibitors were featuring the same products they had displayed at the Cleveland refrigeration show.  
(Concluded on Page 33, Column 1)

## Wright Heads NARC; Action on Licensing Code Is Postponed

By John O. Sweet

CLEVELAND — At their second annual meeting here, members of the National Association of Refrigeration Contractors elected new officers and directors, adopted a newly-revised constitution, and approved a code of ethics, but deferred action on a proposed administrative licensing code.

During the elections, E. S. Wright, of Youngstown, Ohio, was named president; H. E. Wheeler, of Chicago, first vice president; James Lessard, of Seattle, second vice president; Nathan Edelstein, of New York City; recording secretary (reelected); A. M. Palen, of St. Paul, treasurer (reelected); and Ralph W. Lampie, of Richmond, Va., sergeant-at-arms.

Five directors were reelected for two-year terms. They are Edelstein, representing region 1; F. J. Zoppel, representing region 2; and Warren W. Farr, Wright, and Palen, at large. Lessard was elected for a two-year term to represent region 6.

Wheeler was chosen to fill the unexpired term of L. C. Anderson, of River Forest, Ill., as director from region 4, and James E. Perry, of Detroit, was elected to fill the unexpired term of L. C. Anderson.  
(Concluded on Page 13, Column 1)

## Kenmore Products To Market Certain Sizes Of Tecumseh Units

CLEVELAND — Kenmore Machine Products, Inc. of Lyons, N. Y., and Tecumseh Products Co. have made an agreement under which Kenmore will purchase Tecumseh compressors and sell them under the "Chieftain" trade name to national refrigeration wholesalers, L. W. Larsen, assistant sales manager of Tecumseh, announced at the All-Industry Show.

Compressors to be purchased by Kenmore will include the 1/4 hp., the 1/2 hp. single, the 1/2 hp. twin, the 3/4 hp., the 1 hp. twin (in three different lines), and the 1 1/2, 2, and 3-hp. four-cylinder units in two lines for self-contained and remote jobs. The compressor line is available immediately, Larsen stated.

Lawrence C. Smith is president and James E. Russell is sales manager for Kenmore.

## G-E Sees 25% Production Gain In Current Year

### All Allocations on Appliances May Be Out by Year's End

BRIDGEPORT, Conn. — If everything works out all right, the General Electric Co.'s appliance production this year should rise 25% over last year, H. L. Andrews, vice president and general manager of the appliance and merchandise division, indicated here in a published press report last week.

If production is maintained at current levels, C. R. Pritchard, marketing manager, added, all appliance allocations should be discarded by the end of the year.

Andrews stated that refrigerators, one of the appliances still distributed on an allocation basis, are now being turned out at the rate of 1,074,000 annually. He added that he expected a 35 to 40% increase in their production this year.

However, both men emphasized that the "ifs" in these statements are pretty big ones. Andrews noted that his 25% increase estimate is good only if suppliers furnish the steel that they have promised. On the other hand, he conjectured that if, through some remote possibility, a free supply of steel were available, G-E could boost over-all production 70 to 80%.

Pritchard said that a production drop and not market conditions would be the influencing factor if  
(Concluded on Page 4, Column 5)

## 'Table-Top' Refrigerator Is Introduced by Acme

BROOKLYN — A new 3 1/2-cu. ft. household electric refrigerator with an overlapping working table-top designed to fit in with kitchen cabinets, is being introduced by Acme National Refrigeration Co., Inc. here.

Called the "Freeze-O-Matic Jr.," the new model is 3 ft. high, 2 ft. wide, and 21 1/2 in. deep. Net weight is 150 lbs.

The company sees the new model as finding a market in apartments, kitchenettes, bungalows, doctors and dentists offices, drug stores, and as a "second refrigerator" in many homes equipped with a larger model.

Refrigeration is supplied by a 1/2-hp. Tecumseh unit. All-steel cabinet is insulated with fiber glass insulation, and is finished in Dulux. A Ranco automatic selected temperature control is used.

The manufacturer claims that the new model will provide storage simultaneously for the following items: 2 qts. milk, 1 pt. cream, 2 bottles soda, 2 packages frozen food, 1 lb. butter, 2 lbs. lard, 1 jar syrup, 4 cans beer, 1 package of tomatoes, 1 melon, jar of pickles, 4 cans evaporated milk, 1 bottle chili sauce, 3 boxes cheese, 2 doz. eggs, 7-lb. roast beef, 7-lb. chicken.

## Simons Heads Appliance Advertising for G-E

BRIDGEPORT, Conn. — George E. Simons has been appointed advertising manager for General Electric major appliances, it has been announced by A. L. Scaife, advertising manager of the company's appliance and merchandise department.

Simons was formerly manager of advertising and sales promotion and employe and community relations for the General Electric air conditioning department in Bloomfield, N. J.

## Show Aftermath Called Best Yet, But Some Criticisms Noted

CLEVELAND — "What are you going to say about the Show?" one exhibitor asked shortly after the close of the recent Fifth All-Industry Refrigeration & Air Conditioning Exposition.

We try to stick pretty close—at least in the news columns—to "reporting," rather than giving an opinion. And the NEWS staff reports the following as seeming to be the consensus:

1. The Show was tremendously successful in presenting the wide variety of products offered in the refrigeration and air conditioning fields—the best yet by far. And the Show has definitely reached "maturity" in terms of the manner in which it is run.

2. There were complaints about lack of room accommodations again, and a number of exhibitors expressed the opinion that there were less

Missing from this issue is the popular "What's New" feature—but we think its place is more than adequately filled by the pages of pictures depicting the scores of new products shown at the All-Industry Show. Never have refrigeration and air conditioning equipment wholesalers and dealers been offered such an excellent array of products as were shown at Cleveland.

Time and space limitations prevented us from getting them all in this issue, so there'll be more next week.

people present from outside the Central States area that in the last show. But the official registration tally will prove or disprove this point.

3. Some critics disliked the fact that the Show wasn't pointed directly at their interests. (But how can any "All-Industry" Show ever amount to anything or live up to its name if directed to one segment of the field?)

4. Opinion varied widely among exhibitors on the tangible results from the show. There were some spectacular sales made—Fedders-Quigan, introducing a new line of 1/2 and 3/4-ton room coolers, took an order for 30 carloads from D. W. May Co., a New York distributor.

Refrigeration Products Division of Hupp Corp., exhibiting a new carbonated beverage dispenser, is said to have taken more than \$2 million in orders at the Show.

One exhibitor declared "In two days we had more activity in our booth than we had all during the last Show."

No immediate announcement was made following the Show on the exact date and place of the next All-Industry Show, tentatively scheduled for November, 1949. It is understood that a special committee has been appointed to study the matter thoroughly.

## Trade Relations Get Attention of NCRSA

CLEVELAND — At its first annual convention, held here during the All-Industry Exposition, the National Commercial Refrigerator Sales Association elected W. C. Bader of Bader Supply Co., Tulsa, Okla., as its second president.

Its board of directors, at the same time, received for consideration a suggested program of public relations, trade relations, and advertising.

Other new officers elected at the convention were: Irving W. Shell of Lee Shell Co., Chicago, vice president; and Charles Q. Sherman of Refrigeration Equipment Sales, New York City, secretary-treasurer.

Six men were named to the board of directors for one year. They  
(Concluded on Page 36, Column 1)

## Philco Models For '48 Have Lower Prices

### 9 New Refrigerators, 4 Home Freezers Are Introduced

NEW YORK CITY — Philco Corp. last week announced new lines of refrigerators and home freezers, and radios priced at from 6 to 25% below comparable 1947 models.

Nine new refrigerators, four new home freezers, and seven new radios and radio-phonograph combinations were introduced to the public at the display rooms of Philco Distributors, Inc. here on Feb. 2.

James H. Carmine, vice president in charge of distribution for Philco Corp., pointed out that the lower prices are not cuts in existing models, but are reductions made on new and improved models. This, he said, has been achieved by new designs and manufacturing techniques without any change in Philco high quality standards.

Most striking example of lower price on improved product, according to Carmine, is the new Advanced Design model 883 8-cu. ft. refrigerator. This unit has added frozen food storage capacity, adjustable shelves, summer-winter balanced humidity, and other features, yet retails in  
(Concluded on Page 21, Column 1)

## Rewa Views 1948 As 'Competitive' Year for Suppliers

CLEVELAND — Refrigeration Equipment Wholesalers Association, now boasting 180 member companies operating a total of 300 wholesaling establishments, held its annual meeting during All-Industry Show week, and in the smoothly run program presided over by Retiring President George W. Roche of Roche & Hull, Baltimore, found satisfaction in the very excellent relations achieved with other sections of the industry, but took steps to keep a better "weather eye" on the sales and credit barometers of business in its own particular part of the industry.

Closest thing to the sensational at the meeting was the appearance on the program of Warren W. Farr, president of the National Association of Refrigeration Contractors. Some of the wholesalers have looked askance at what they thought looked like some sharpshooting at them by the contractors, but Farr assured them:

"We recognize the wholesalers place in the distribution of our industry's products and have no thought of eliminating them... there is nothing in our constitution  
(Concluded on Page 3, Column 1)

## Dairy Show Scheduled for Atlantic City In October

ATLANTIC CITY, N. J. — The sixteenth Dairy Industries Exposition will be staged in Atlantic City during the week of Oct. 25 to 30 inclusive, the Dairy Industries Supply Association announces.

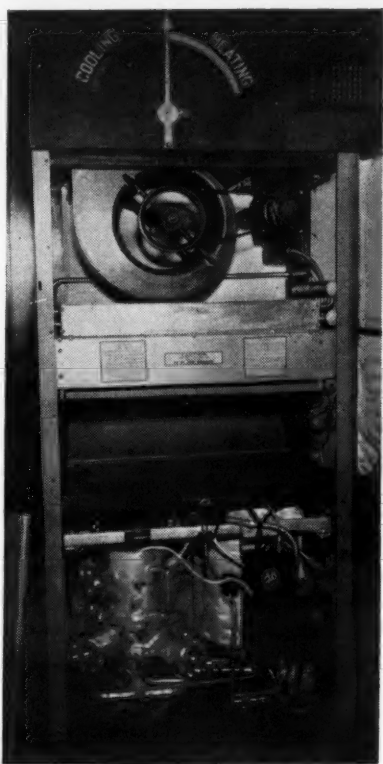
A greater number of exhibitors than ever before and a showing of the very latest in dairy equipment, supplies, and technological improvements, will highlight the exposition, the association affirmed.

Timing of the Dairy Industries Exposition is simultaneous with the dates of conventions.





How the Stoddard Mfg. Co.'s 5-cu. ft. apartment house model refrigerator fits in with kitchen cabinets was demonstrated.



Working model of the "Miracula" heat pump year-round air conditioning system shown by General Engineering & Mfg. Co. The 5-hp. compressor, condenser, and thermostatic control are in the bottom. Blower and heating and cooling coils in upper section. Indicator is in a neutral position because the unit was operating on the heating cycle, and the air bypass was in operation.



New Mitchell Mfg. Co. 1/2-ton room air conditioner interests Mrs. Cele Tyson of Tyson Metal Products Co., Pittsburgh.

## New Items at All-Industry Show



This new ice cube maker made by La. Crosse Cooler Co. is of stainless steel construction with curved sliding doors, and has a capacity of 1,180 cubes and a bulk storage compartment for cubes or frozen foods. It is shown off here by L. C. Van Dervort (left) and H. A. Phillips of the company.



Joe Simons of the Joseph Simons Co., Hartford, Conn., offers Mrs. Lyonel Berken a drink from the new Cool-stream model CP 10-48 electric water cooler, distinguished by plastic basins in practically any color desired.

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your assurance of **UNIFORM DEPENDABILITY**

### MANY BENEFITS FOR YOU!

Close tolerances for smooth, quiet operation and long life of unit.

Assurance of precision workmanship at every step of production.

Assurance that U. C. Condensing Units are of **UNIFORM** high quality.

WRITE OR WIRE today. Learn how your refrigeration problems can be solved—the Universal Cooler way.

Some of the many air, electrical and optical devices used in the inspection of Universal Cooler Condensing Units.



George Danoian of the Cornelius Co. dispenses a drink from the new 6-way mixing faucet for carbonated drinks which Cornelius is introducing. This faucet, by mere positioning action, will draw six different flavors or five flavors and soda. Dispensing system comes with containers for different flavors.



## FLOATING PARTITIONS

Yes . . . "Floating Partitions" and several other exclusive features make a "HALDORF" *easy to sell!* Investigate and get the facts. You'll learn there's **MORE PROFIT** for you in a "HALDORF" because of these exclusive features . . . and because *the price is right!* **CONTACT US TODAY. A few good Distributor Territories are still open.**

Model 4718C  
18 Cu. Ft.



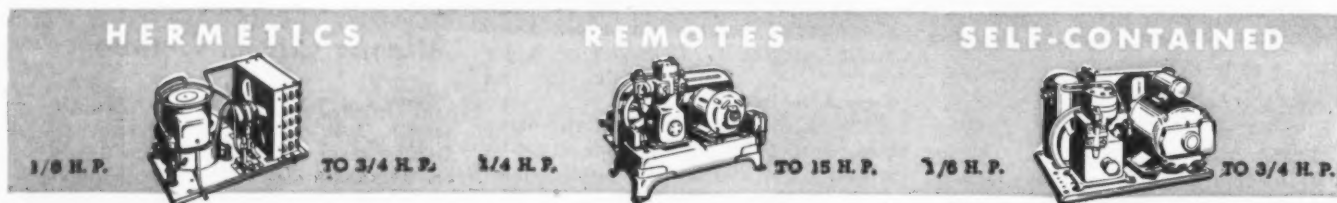
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*"Where Store Space Is Limited Suggest A HALDORF"*



# UNIVERSAL COOLER

DIVISION INTERNATIONAL DETROLA CORPORATION  
MARION, OHIO • BRANTFORD, ONTARIO



## REWA Looks To Competitive Year--

(Concluded from Page 1)

or plans for a cooperative buying setup."

Not too much was said about inventories in the meeting sessions, but Harold R. McCombs, who delivered a notable paper on the subject at a previous meeting, made a plea for greater cooperation on the association's efforts to collect sales and inventory figures, pointing out "wholesalers will have to know where they stand in 1948."

Closer attention to credit policies were indicated as becoming more vital in two of the papers given at the Rewa meeting. Some reports of the regional association credit interchange setups seemed to show greater-than-normal customer delinquencies in recent months.

New president of Rewa is Harold G. Stern of Refrigerative Supply, Inc., Seattle, Wash. H. Whiting Holt of Orr, Inc., Pittsburgh is vice president; Frank R. Pond, Refrigeration & Industrial Supply Co., Inc., Minneapolis, is secretary; and Jack P. Glass, Chase Refrigeration Supply, Chicago, is treasurer.

New directors are Charles W. Eskridge, Henry V. Dick Co., Charlotte, N. C. (to fill out unexpired term of Warren Parker of Hasco, Inc., who died last year); Ben V. Blazer, M. Blazer & Son, Passaic, N. J. (region No. 2); Frank Pond (region No. 7); Harold Stern (region No. 11); R. E. Warwick, Plumbing Wholesale Co., Jackson, Miss. (region No. 12).

Two new members were admitted to the association at the meeting: R. D. Marshall Co., Albany, N. Y.; and Refrigeration Supplies, Inc., Springfield, Mass.

Ted Glou of Central Service Supply Co., Syracuse, N. Y., a past-president of the association, estimated that there are about 40% more parts and equipment wholesalers in the field now than before the war.

"Some of these newer wholesalers have established very aggressive sales tactics, and they have built up substantial followings among their trade," Glou said in his talk on "Merchandising by the Wholesaler."

"Your competition, however, is coming from several places. It is going to come from within, that is

your direct competitors, and it is going to come from without.

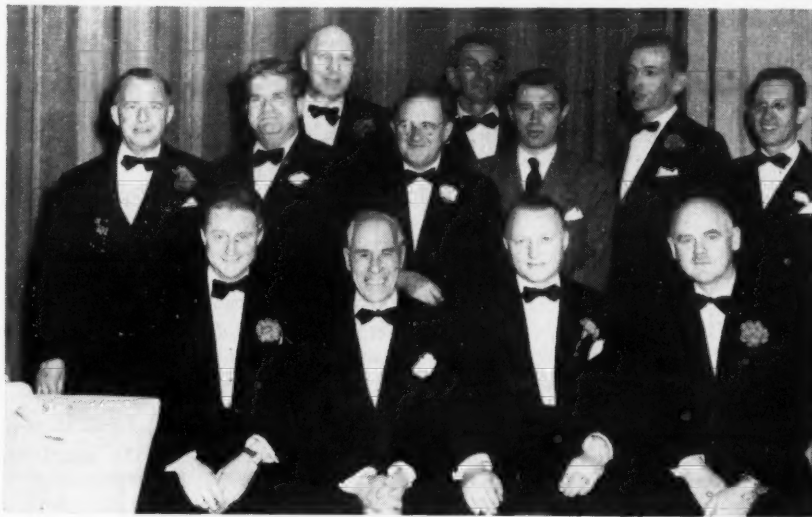
"With the increase in the cost of doing business and the necessity of people to have to purchase what they need to exist, people have fewer dollars to spend on the items that they want to buy."

"Everybody is going to be fighting for this dollar. It is up to us, in the refrigeration industry, to advertise and promote refrigeration so we can make the customer spend for refrigeration first and other items secondly."

"Recently I received quite an elaborate brochure from the Heating Contractors in Syracuse, and with it was a little card with a cartoon on it expressing the desire of the consumer. The card said:

"You will want to buy a refrigerator, you will want to buy a radio, you will want to buy an automobile, but you will need a heating plant first."

"Now, it is up to us to do that very same thing in the refrigeration industry."



(Photo by Austin Jones, Kerotest Co.)

This group picture shows the new officers of REWA. Those seated are: (left to right) J. P. Glass, of Chase Refrigeration Supply, treasurer; Harold G. Stern, of Refrigeration Supply, Inc., president; H. Whiting Holt, of Orr, Inc., vice president; and Frank R. Pond, of Refrigeration & Industrial Supply, Inc., secretary.

Behind them stand the association's directors: E. C. Marsden, of Marsden & Wasserman, Inc.; George J. Roche, of Roche & Hull; J. D. Ross, of Railway Engineering & Supply Co.; H. S. McCloud, executive secretary of REWA; R. E. Warwick, of Plumbing Wholesale Co.; Ben V. Blazer, of M. Blazer & Son; Charles W. Eskridge, of Henry Dick Co., and Joe M. Mideke, of Mideke Supply Co.

## \$2,285 for Employee Suggestion Sets Record

ERIE, Pa.—Charles R. Bendig has received \$2,285 for a suggestion which saves times and improves quality in certain refrigerator cabinet parts at Erie Works, General Electric Co. The award is the highest paid in Erie Works since the suggestion system was started here in 1921.

Bendig had been thinking for years of a way to improve quality of certain refrigerator cabinet parts and finally hit upon the idea to move panel finish lines closer to the machine shop punch presses so the storage chain would hold more finished pieces and improve the efficiency of inspection.

Bendig, recently appointed foreman in the outer door finishing section, was an instructor in the section at the time the suggestion was submitted.

The highest previous suggestion award was \$1,365 paid in 1945 to another refrigerator cabinet division employee.

*Freshness...*

## GUARDED BY BAKER CONTROLLED COLD

In dairies and processing plants . . . on railroad cars and trucks . . . at storage warehouses and locker plants all over America, you'll find Baker *controlled cold* at work — faithfully guarding foods in all their original freshness on their long trip from farms to city tables.

For Baker has a proud record of achievement in refrigeration and air conditioning. Over 40 years of experience has given its engineers the knowledge to plan truly "zone-balanced" plant systems — with

perfect co-ordination between all units.

And from Baker's modern factories in Omaha, Neb., and South Windham, Me., come one of the world's finest lines of equipment — complete for both Freon and Ammonia — precision built for long life and low-cost operation.

Let Baker experts help you solve your air conditioning and refrigeration problems. For address of your nearest Baker Engineer or Distributor, write: Baker Ice Machine Co., Inc., South Windham, Me.

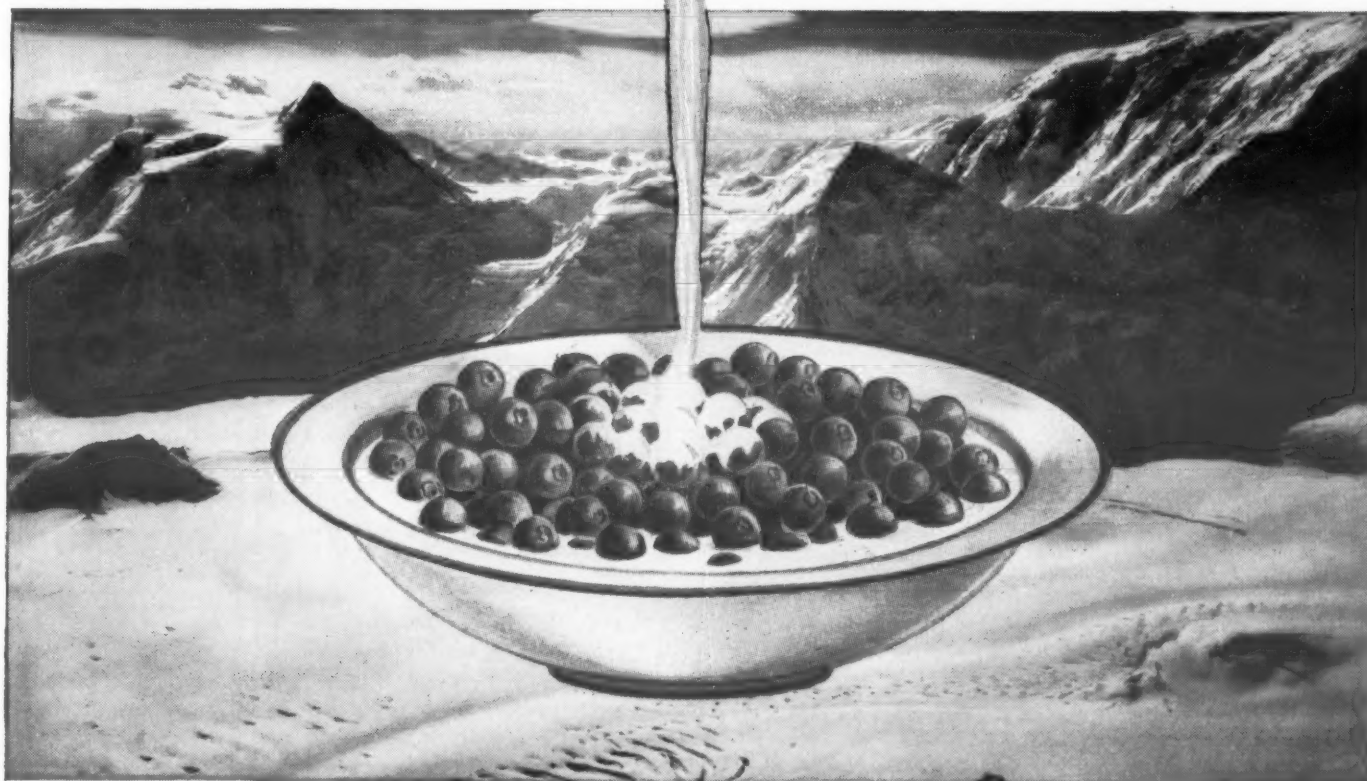
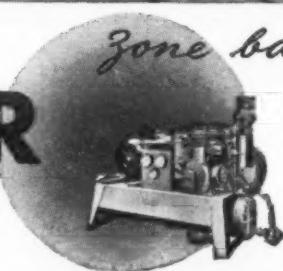


Photo by Bradford Washburn

*Zone balanced • Engineered*

# BAKER

# AIR CONDITIONING AND REFRIGERATION



Factories at OMAHA, NEBRASKA AND SOUTH WINDHAM, MAINE • • • HEADQUARTERS, SOUTH WINDHAM, MAINE

### Wanted

### Range Top Source

Manufacturer requires immediate source for range top stampings. If you have dies and extra press capacity you are urged to investigate the possibilities of this very desirable connection. Write giving dimensional data and available capacity.

Box 2671, Air Conditioning & Refrigeration News

## NIAGARA

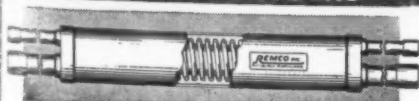
### AEROPASS\* CONDENSER

... increases refrigeration plant capacity; saves power and water. Patented features: "duo-pass" coil keeps condenser tubes free from scale; "oilout" constantly cleans oil and dirt from the refrigerant. "Balanced Wet Bulb Control" maintains minimum practical compressor head pressure.

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### REMCO "Liquid-Fin" HEAT EXCHANGERS



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transfer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high.

ASK YOUR WHOLESALE... OR WRITE  
REMCO, INC., ZELIENOPLE, PA.



## New Pipe Insulation Will Service Both 'Hot 'n Cold' Lines

PITTSBURGH—Claimed to be the first pipe insulation that can be used for both hot and cold lines, indoors and outdoors, is the new Foamglas insulation developed by the Pittsburgh Corning Corp., as announced here last week by H. R. Haynes, sales manager for the corporation.

"The new insulation, of cellular glass construction, is the ideal pipe protector for processing industries where exact temperature control is required, wherever heat is to be retained or excluded. Its cost, on an annual basis, is less than other insulations," according to Haynes.

Of true glass composition, the new product retains its original insulating efficiency permanently. It is unaffected by humidity, is resistant to fumes, vapors, acid atmospheres, and many other elements.

Foamglas pipe-insulation is resistant to fire. It is non-combustible and acts as a fire retardant. In addition, it is waterproof and vapor-proof. The composition is strong, rigid, light in weight, and easy to cut and fit with ordinary tools.

The insulation comes in two equal half-sections, 18 in. long, and is being manufactured for all sizes of pipe. Equipment to produce the new insulation in sizeable quantities has been installed at the Port Allegany, Pa., plant of Pittsburgh Corning.

When installed according to the manufacturers specifications, the new Foamglas pipe-insulation may be used through temperature ranges from

-200° F. to 800° F., it is explained.

This new product is composed of the same material and possesses the same characteristics as the Foamglas blocks and shapes being used on tanks, towers, ducts, and breechings, and the standard Foamglas slabs used for roof, wall, and floor insulation.

## Kern Moves Up In G-E Service Setup

BRIDGEPORT, Conn.—William J. Kern has been appointed assistant supervisor of the field service section of the General Electric Co.'s product service division, reports W. C. Noll, manager of the technical and educational sections of the division.

A graduate of the University of Redlands, Kern joined the company in San Francisco in 1941 after being connected for 11 years with W. A. Ramsay, Ltd., Honolulu distributor for G-E. He subsequently became a product field representative and district service supervisor in San Francisco.

## Robinson Is Purchasing Agent at Standard Tube

DETROIT—J. Albert Robinson has been named purchasing agent for the Standard Tube Co.

Robinson, during the war, served in administrative capacities in the steel divisions of U. S. Maritime Commission and War Assets Administration at Washington, D. C. Prior to Washington he had been connected with Youngstown Sheet & Tube Co. and Allegheny Steel Co.

## Air Conditioning Is Aid to Growth Trend In Southern States

NEW YORK CITY—Air conditioning is one of the strong factors influencing the growth trends in southern and western states, the Marx Realty & Improvement Co., Inc. here concluded after completing a survey to determine what cities have the best chance for economic expansion.

The firm's report on the survey noted that because of air conditioning, "the South's resurgence from Civil War effects is just about complete."

The Marx firm specializes in finding favorable locations anywhere in the United States for chain stores. Cities it rates at the top of the list are Tampa, Fla.; San Antonio, Tex.; Long Beach, Calif.; and Phoenix, Ariz.

## Buffalo Dealership Has New Owner

BUFFALO—The Murphy Appliance Co., 1981-83 South Park Ave., has been purchased by J. Clifford Pattenden, of Hamburg and Robert Greene of Wanakah from Kenneth H. Murphy, who has owned and operated the company for the last five years. The present name of the concern will be retained. It will be operated under the supervision of Pattenden, who has been active in the appliance merchandising field here for five years.

## Servel Reports 1947 As Recording Biggest Volume In History

EVANSVILLE, Ind.—The largest sales volume in the history of Servel, Inc. was reported for the fiscal year ending Oct. 31, 1947 by Louis Ruthenburg, president.

In his annual report to stockholders, Ruthenburg noted that though higher prices for the company's products accounted for a share of the \$59,550,490 sales total, increased unit volume also was a strong factor.

He pointed out that sales of electric commercial refrigerating units rose 111% over fiscal 1946, and household refrigerators were up 14%. Though still small, the number of air conditioning units sold was several times that for 1946 when only pilot plant production was operating. Water heater volume was also up substantially, he said.

As a result of the 59% increase in sales volume during fiscal 1947 as compared with 1946, net earnings rose from 67 cents per common share to \$1.20 per share, he declared.

Ruthenburg also told the stockholders that \$3,407,520 was spent during the fiscal year for new buildings, machinery, and equipment, and \$2,319,815 went for special tools, dies, jigs, and fixtures. The company has spent nearly \$12,000,000 on plant and tools during the last three years.

For future plant improvement, Ruthenburg explained that Servel has negotiated a \$9,000,000 loan with the Prudential Insurance Co. of America to run for 15 years at 3 1/4%. Annual sinking fund payments will start in 1950. This new loan enabled the company to pay off all previous bank loans and bring to end a credit agreement entered into on Jan. 2, 1947, he said.

## G-E Sees 25% Gain--

(Concluded from Page 1, Column 3) allocations should be required longer than the end of the year. Market conditions, however, could bring about an end to allocations by fall, he stated, but he added that he did not think this too probable.

Such conditions would be a falling off in the demand for such scarce items as refrigerators and ranges and an unexpected increase in over-all industry production.

Allocations currently affect 50% of General Electric's appliances, Pritchard said. On the allocations list are refrigerators, ranges, automatic and conventional washers, clocks, irons, and toasters. All distributors accept their quotas in full on all of these items, he pointed out.

Garbage disposal units and, in some areas, vacuum cleaners now call for "real selling," he noted, while dishwashers, electric blankets, and coffee makers are moving more slowly.

Pritchard pointed out that General Electric intends to spend \$500,000 on dealer sales training this year, twice as much as in 1947. "Our main problem is to train the dealers and their retail salesmen now," he explained. "It is particularly difficult since the turnover of retail sales personnel continues high."

Commenting on General Electric's lowered price structure, Andrews declared, "If labor in industry gets a substantial price increase, I don't think it will be possible for G-E to hold its present appliance prices."

He explained that many of G-E's appliances are assembled from components manufactured by other firms. So, if these suppliers should grant increases and pass the increase on to G-E, G-E's prices would have to rise, he indicated.

## Legislative Bill Aimed at Kickbacks

RICHMOND, Va.—Pending in the Virginia Legislature is a bill to forbid banks from offering or agreeing to "kickbacks" to appliance dealers in return for financing.

Penalties of from \$1,000 to \$5,000 would be provided by the bill.

## Simpli-Cycle Co. Formed

BRAWLEY, Calif.—Simpli-Cycle Refrigeration Co. has been incorporated in Imperial County, Calif., with a capital of \$75,000. Principals are: D. W. Ransdell, Frank Caudel, and Raymond O'Connell, all of Brawley.

# QUIET at ANY BURNING RATE with TORRINGTON VAIRIFIED\* AIR IMPELLERS

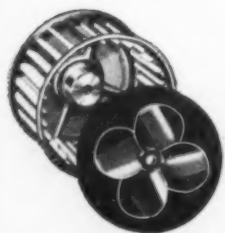
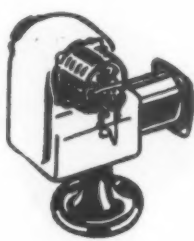
Adjusted for a burning rate of 2 to 3 gallons per hour, an oil burner gave excellent performance in every respect. But when set for a lower consumption, noise became a problem.

Study by Torrington's air impelling engineers disclosed that by using a smaller size Airtor blower wheel for the lower burning rates, the noise problem was eliminated. With slight, inex-

pensive housing modifications, the use of Airtor wheels in two sizes was entirely practical.

Why not benefit from the advantages of Torrington Air Impellers and our years of research experience? We can help you most when your product is in the early stages of design.

Sales engineers in all principal cities.



THE **TORRINGTON**  
MANUFACTURING COMPANY, TORRINGTON, CONNECTICUT

A SMALL  
But MIGHTY  
IMPORTANT  
FEATURE



The BEVERAGE-AIR has more capacity in less space than any other cooler.

## "BEVERAGE-AIR" BEVERAGE COOLER

Dealers and Distributors: WRITE FOR MORE DESCRIPTIVE LITERATURE

- Incorporated in our design for a more efficient Beverage Cooler is the glassware storage rack on top where it is needed most. The rack is made of corrugated Stainless Steel and can be utilized when Cooler is used under a standard bar.

The "BEVERAGE-AIR" is manufactured by the

**PUNXSUTAWNEY COMPANY**  
PUNXSUTAWNEY, PENNSYLVANIA



## Packers Association Sponsors Frozen Food Industry Show In Chicago March 15-18

NEW YORK CITY — Nineteen major problems, 12 of a general nature and seven on technical aspects, will be considered at the second national Frozen Food Industry Exposition and convention to be held at the Hotel Stevens, Chicago, March 15 to 18, inclusive, states Howard F. Lochrie, chairman of the exposition committee, and director of marketing, Birds Eye-Snyder division, General Foods Corp.

The exposition is under the sponsorship of the National Association of Frozen Food Packers, Washington, D. C. Representative companies manufacturing equipment, machinery, supplies, materials, and service will exhibit at the show.

Clapp & Poliak, Inc., New York, will manage the exposition. Hotel arrangements may be made with the National Association of Frozen Food Packers, 1415 K St., N.W., Washington, D. C.

Concurrently with the packers' convention, there will be meetings of distributors and brokers at the Congress and Morrison hotels. Annual meetings of both the National Association of Food Packers and the National Wholesale Frozen Food Distributors, Inc., will be held Tuesday, March 16. Also represented at the meetings will be the National Food Brokers Association. The Quick Frozen Foods Association of Chicago is cooperating in the handling of convention arrangements.

Conference subjects include "How the Banker Views the Frozen Foods Industry," by Herbert Prochnow, executive vice president, First National Bank of Chicago; "Importance of Research to Development of the Industry," Dr. Franklin Snyder, president, Northwestern university; "Impact of Food and Drug Administration Standards on the Frozen Food Industry," Arthur Herrick, authority on F.D.A. standards for food products; "Public Relations as a Factor in Industry Development," John Moninger, American Meat In-

stitute; "Warehousing Problems," E. M. Burns, vice president, National Association of Refrigerated Warehouses, and secretary, Northwest Frozen Foods Assn.; "Distribution Problems Affecting Consumer Acceptance," J. E. Hall, manager of production, Pictsweet Foods Co., and "What the Consumer Expects," Elizabeth Sweeney, household equipment editor, *McCall's* magazine.

Other subjects include domestic and international food problems, the chain store and frozen foods, transportation, the preserver's stake in the industry, and the merchandising outlook.

Topics assigned for the technical sessions are recent developments in frozen food technology, nutritive values, sanitation problems, use of chlorine in frozen food production, fruit varieties for freezing, microbiological problems in quality control, and vegetable varieties for freezing.

## Sell Conditioners Year-Round

Monthly Sales of Air Conditioning Avert Seasonal Bottlenecks, Insure User Satisfaction, Switzer Says

CLEVELAND—"The future of the air conditioning business will be immeasurably strengthened and stabilized if seasonal buying is discouraged and equipment sales are established on a steady, year-round basis."

That was the opinion voiced by W. F. Switzer, commercial sales manager for Frigidaire, during the Fifth Annual All-Industry Air Conditioning & Exposition Exposition.

He based his claim on the fact that normal spring buying rushes cause difficulties that often lead to user dissatisfaction. He cited lengthy waits for installation of equipment as a pertinent example.

"Naturally, if the dealer is swamped by a host of orders for air conditioning equipment each spring," Switzer said, "he cannot handle a

volume of orders as adeptly as he might if part of this volume were sold and installed during the fall and winter months.

"If we are to gain complete user satisfaction," Switzer continued, "we must strive to have equipment ready for operation with the first approach of warm weather. Otherwise the customer sees a good share of the benefits of his uninstalled air conditioning equipment dwindling with each passing warm day."

Switzer averred that the average merchant or businessman, if prompted, would welcome any help given him in anticipating the future needs of his business.

"Year-round selling would help the dealer give his prospective customer a more complete situation study and estimate of individual user air condi-

tioning requirements," stated Switzer. "Better user relations, in turn, lead to more and more sales. A bigger volume of sales is possible when the dealer's sales organization is set up to sell on a month-to-month basis throughout the year."

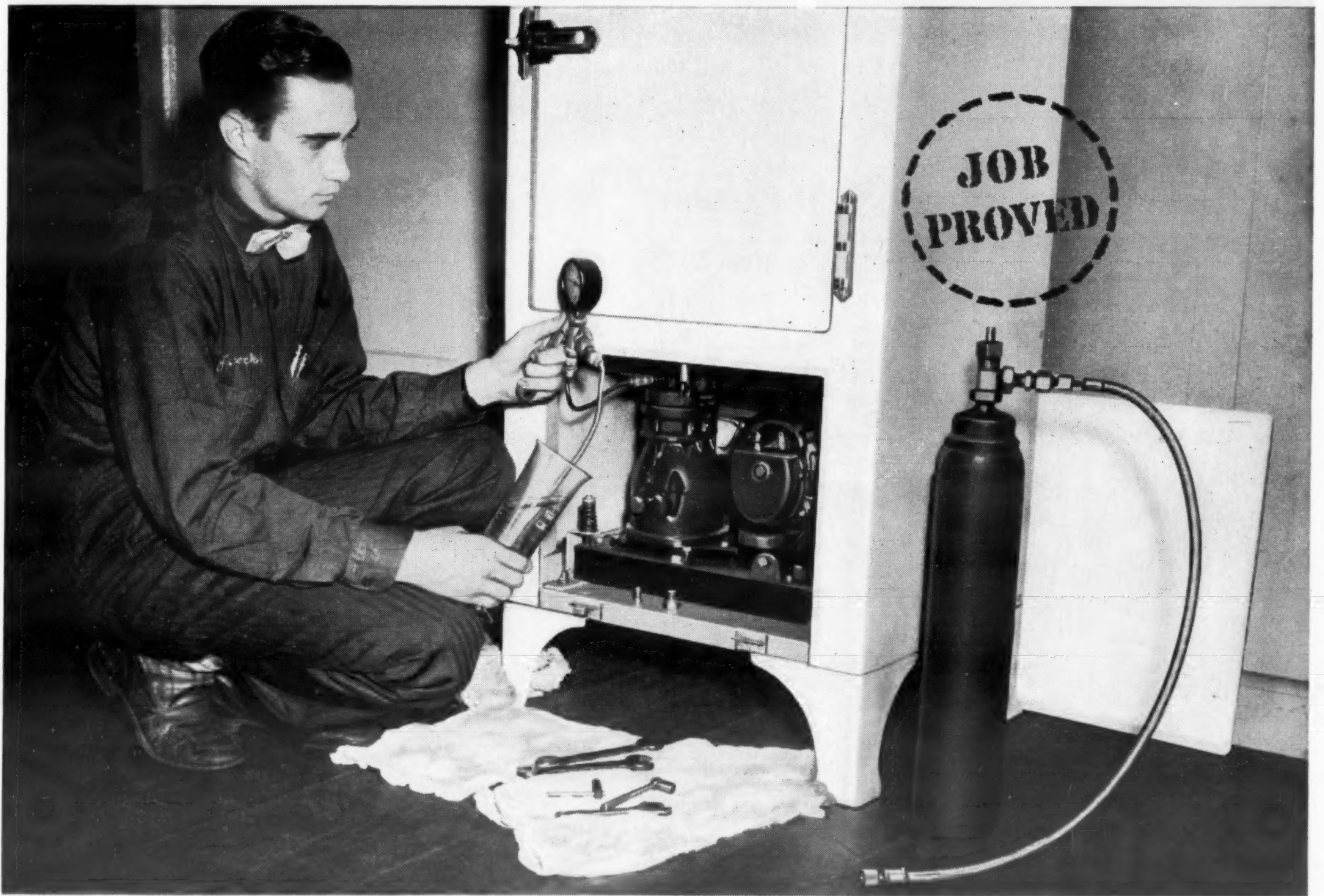
"Frigidaire dealers have been making delivery through the winter months of a new 5-ton store conditioning unit, designed for stores, business houses, and offices," he said.

"Our dealers have been advised," he continued, "that the back order situation on large compressors and most other heavy-duty equipment for central systems has been alleviated. The large central air conditioning systems are being manufactured in vertical and horizontal models. A special suspension type model will also be produced. In addition Frigidaire's complete air conditioning line will include small compact room coolers."

### Fixture Firm Set Up In West

SANTA ANA, Calif. — Orange County Refrigeration & Fixture Co., Inc., has been formed here.

## Refill with the Best Oil You Can Buy



## SUNISO REFRIGERATION OILS...

Custom-Made for Refrigeration Industry, First Choice with Makers of Original Equipment

For many years the refrigeration industry has practically standardized on Suniso Refrigeration Oils. In fact, the larger manufacturers of refrigeration equipment probably use more Suniso oils than the total of all other brands. Suniso oils are now available through leading distributors. Six different grades cover the needs of every type of refrigeration and air-conditioning equipment.

Suniso oils are exceptionally low in moisture content (less than 30 parts of water in 1,000,000 parts of oil). They are unusually stable and do not react with new types of refrigerants, such as the Freons and methyl and methylene chloride. Crystal clear, characterized by a high degree of purity, they offer the service-man maximum assurance of trouble-free lubrication.

For further information about Suniso oils and the lubrication of refrigeration and air-conditioning equipment, write Department RN2.

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**SUNOCO**

**INDUSTRIAL**  
**PRODUCTS**

### 1<sup>ST</sup> IN LINE AT THIRST TIME!

OASIS — made by the world's largest maker of electric drinking water coolers — is first in line when it comes to delivering complete thirst relief at low cost. Write for details.

The EBCO Manufacturing Co.  
401 W. Town St., Cols. 8, Ohio



Just plug in - and use  
**"Character"**  
THE WORLD'S SMARTEST  
Self-Contained Florist  
Display Refrigerators

- Unitized
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- Large, Display Glass Sliding Doors
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No. 630 Junior S/C  
Size 72" x 34" x 86"

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For More Profits in  
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Tie up with  
**TYPHOON**  
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Product of over 30 years of experience  
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Division of Ice Air Conditioning Co., Inc.  
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for QUICK REFERENCE

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BEEN REVISED TO  
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FOR YOUR 1948  
REPLACEMENT  
SALES

ORDER NOW!

## Do You Have 'One Foot In the Door'?

Footpower was fine  
for spinning wheels



## TO TURN A SHAFT TODAY...

Aren't these the qualities you want in a modern appliance motor: compactness, efficiency, economy, smoothness, quietness and dependability? These same qualities—plus individual engineering for the specific application—distinguish the Delco motors used in leading makes of refrigerators, washers, ironers, stokers, oil burners, air conditioners and other appliances. Delco Products' long association and fine record with the appliance industry are behind the Delco motors you specify today. Built in sizes from 1/8 to 50 h.p. Delco Products Division, General Motors Corporation, Dayton, Ohio.

Specify  
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**DELCO  
PRODUCTS**  
DAYTON, OHIO

**DELCO MOTORS**  
Power America's  
Leading Appliances

## Tampa Dept. Store Sales Lead In Southeast Area

TAMPA, Fla.—Department store sales in Tampa are leading those in cities throughout the Southeast which area shows some of the top gains in the country.

Figures compiled by the Federal Reserve District gave Tampa a seasonally adjusted index of 522 for November as compared with 464 for the previous year, when Tampa also was the No. 1 city. Nashville had second place with 449; Jacksonville third with 444; Baton Rouge, La., fourth with 423; and Atlanta fifth with 420. Other cities in the order of their standing were: Birmingham sixth, 399; Chattanooga seventh, 388; Montgomery, Ala., eighth, 373; New Orleans ninth, 364; and Miami tenth, 362.

Preliminary figures indicated a sales volume for the year in the area of \$527,000,000 as against \$507,000,000 in 1946. The 1946 total was \$103,000,000 higher than that for 1945.

Refrigerators and home appliances accounted for most of the increase last year with gains shown in radio, china, glassware, and home furnishings.

## 28,200 Sell Bendix Equipment

SOUTH BEND, Ind.—A trained sales force of 28,216 persons is selling Bendix automatic washers, dryers, and ironers throughout the United States. W. F. Linville, general sales manager of Bendix Home Appliances, Inc., disclosed at a sales conference here.

## Ft. Wayne Shops Offer Premiums Again

FORT WAYNE, Ind.—Premiums have returned in the appliance business here.

Frank's store is using large newspaper space to announce the giving away of a 6-piece cast aluminum cooking set consisting of one each of 1 1/2-quart sauce pan, 2-quart sauce pan, 3-quart sauce pan, 10 1/2-in. Dutch oven, 10 1/2-in. chicken fryer, and a 14 1/2-in. oval roaster, with each purchase of a \$189.50 or a \$229.50 Roper gas range.

The special bonus offer was good for Friday and Saturday business in the large appliance department.

## Nash-Kelvinator 1947 Profit Rises \$1.5 Million Over '46

DETROIT—Nash-Kelvinator Corp. reports a net profit after taxes for the first quarter of its fiscal year ended Dec. 31, 1947, of \$5,640,974, amounting to \$1.30 a share.

This compares with a profit of \$4,100,040, or 94 cents per share after taxes, for the corresponding period of the previous fiscal year.

The increase over previous years is largely accounted for by a corresponding increase in sales volume.

## Poll Shows Big Market for Ironers, Clothes Dryers

SOUTH BEND—Market potential for automatic clothes dryers and home ironing machines is tremendous, according to surveys recently completed by the market research department of Bendix Home Appliances, Inc.

Only 2.5% of home washing machine owners surveyed have automatic clothes dryers, leaving the 97.5% who use lines as potential customers for the newest labor-saving device in the home laundry.

The disclosure that 90.5% still use an electric hand iron, as against 9.5% that use a mechanical ironer, emphasizes the market potential in view of another national survey which disclosed 60% of the housewives questioned disliked ironing most among all household tasks.

## Hotpoint Holds Monthly School for Demonstrators

CHICAGO—A use-value training school emphasizing actual work with major kitchen and laundry appliances is now open to demonstrators, sales persons, home economists, and equipment specialists from all sections of the country under qualified technicians who have tested and worked with the equipment.

The classes, sponsored by Hotpoint Institute in its Chicago kitchen laboratories and testrooms, are designed to acquaint trainees with complete performance of each appliance in addition to providing practical product information.

Lecture-demonstrations and work shop experience will be supplemented with individual conferences and field trips to see actual installations of the equipment. The group will also be taken through the factories to view the manufacture of household appliances.

Commercial cooking equipment will be demonstrated at the Illinois Bell Telephone Co.'s galley which has recently been completely outfitted with Hotpoint stainless steel equipment.

The school will be offered once each month for 10 months. The next classes are scheduled for Feb. 15 through 20 and March 14 through 19. Registration may be made through any Hotpoint distributor or sales manager.

## House, Appliances for \$2,650

FREMONT, Neb.—Modern Construction and Manufacturers, Inc., a new firm here, has started production on small prefabricated houses to sell for approximately \$2,650, including an electric refrigerator, circulating heater, and kitchen range. R. B. Leach, president, said one style house, 14 x 22 ft., will be concentrated on for the present, and will be completely insulated.

## Fire Ruins All Store's Goods

HERMON, N. Y.—The Moulton Electric Store was completely destroyed in a fire Jan. 26 which swept a business block here with loss estimated at \$100,000. The entire stock of the electrical appliance store was lost.

The unmistakable  
mark of Quality

*Stainless  
Steel*

The instant Mrs. Housewife spots stainless steel shelves in your new model domestic refrigerator, she knows it means extra quality. For "Stainless" represents quality that she can see and understand and your quality story takes on a real meaning for her.



Here at United we fabricate all types of materials including stainless steel. Leading manufacturers of domestic refrigerators have come to depend on United for their welded wire needs, knowing full well that regardless of material or finish, they can get it here. If it's welded wire or wire and steel, check with United first!

**UNITED STEEL AND WIRE CO.**  
BATTLE CREEK, MICHIGAN



## Carrier Corp. Books \$47,600,000 Worth Of New Business In '47

SYRACUSE, N. Y.—Carrier Corp. reports a net profit of \$2,272,774 or \$3.44 per common share for fiscal 1947, as compared with \$309,439 or \$0.20 for the preceding year.

These earnings were after certain extraordinary charges, including \$789,274 of expense incident to the acquisition and partial utilization in 1947 of a sizable new plant just outside the city of Syracuse.

The corporation completed sales of \$52,910,590 during the fiscal period ended Oct. 31, 1947, as compared with \$23,476,247 in fiscal 1946. This increase reflected both the heavy demand for products and services and greatly improved production facilities.

Both the earnings and the sales figures reported by Carrier were the highest in its history.

New business booked by Carrier Corp. during the fiscal year totaled \$47,686,249. The comparable figure for the preceding 12 months was \$40,053,004.

Carrier's backlog of unfilled orders totaled \$21,668,140 as of Oct. 31, 1947, a decrease of \$9,967,051 from the same date a year earlier. More than half of this decrease resulted from cancellations by the corporation of orders booked prior to fiscal 1947. This action was taken in order to establish a thoroughly realistic basis for current production planning.

Simultaneously with the release of its annual report, Carrier announced to stockholders a program whereby any member of the board of directors who has passed 70 years of age may become a director emeritus, the objective being to retain the experience and counsel of retiring directors.

The present board members who will become directors emeritus after the annual meeting in February are: Dr. Willis H. Carrier, Walter L. Conwell, Frederick S. Fales, and Charles J. Staples. It is expected that Dr. Carrier will be designated as chairman emeritus of Carrier Corp.

## Minneapolis-Honeywell Picks Staff for New Wichita Office

MINNEAPOLIS—A branch office serving Wichita, Kans., and surrounding territory has been opened by the Minneapolis-Honeywell Regulator Co.

Manager of the new branch, located at 1514 East Central, Wichita, is Lynn H. Johnson, Jr., who has been sales manager of the company's gas controls division until his latest promotion.

Other personnel of the new office include Donald D. Baker, sales engineer for the industrial instrument division; Robert F. Perkins, sales engineer for the heating controls division; and Robert F. Jamison, air conditioning controls sales engineer. Lloyd Taylor will be in charge of air conditioning controls service and installation.

## 'Shoddy' Work by Minority of Radio Repairmen Brings RMA Recommendation To Police Industry

NEW YORK CITY—The Radio Manufacturers Association last week adopted a plan which it said is designed to end "shoddy work and overcharging by a distinct minority of radio repairmen."

Bond Geddes of Washington, executive vice president of the association, said the board of directors wound up a three-day meeting by adopting a two-point program "to police the industry without outside help."

Geddes said the program, worked out in a series of recommendations to members, urges them to promote and advertise authorized dealers and to consider the possibility of cancellation of franchises should unethical practices be discovered.

The other point commits the association to cooperate with organizations of radio repairmen to spread wider technical knowledge as well as ethical standards.

The recommendations grew out of an attempt in New York City to end radio repair abuses by municipal licensing. Geddes said:

"It is an attempt to alleviate a condition of abuses in the industry by the industry itself—to end shoddy work, overcharging, and charging for work not done by a distinct minority of radio repairmen."

"There are enough bad actors in the business whose actions reflect on the industry as a whole," he declared.

The board voted to cooperate in holding five meetings annually with

radio technicians similar to the one held Jan. 11-13 in Philadelphia, and accepted the invitation of the Canadian Radio Manufacturers Association to hold its meeting in Toronto April 8-9.

## Crider Appoints Wurzbach West Coast Agent

OAKLAND, Calif.—William Wurzbach, a veteran of 15 years in the refrigeration industry, was recently appointed west coast sales representative for Crider Corp., condensing unit manufacturer. In his new capacity Wurzbach will cover the area west of the Rocky mountains.

He formerly held a similar post here with the Service department of the Kelvinator division of Nash-Kelvinator. At one time he was also connected with Kelvinator's Export division as representative on the west coast.

## Carlson Named Victor Products Chicago Sales Representative

HAGERSTOWN, Md.—Victor Products Corp. has appointed C. B. Carlson as sales representative in the Chicago territory.

Carlson has been in the engineering field for the past 15 years and prior to this new appointment has held the position of manager of the service department at Victor Products.

## Florida Dealer Handles Norge

MIAMI SPRINGS, Fla.—Acquisition of the exclusive Norge agency for the Hialeah-Miami Springs area is announced by the Hialeah Home & Auto Supply Co.

The company will now feature a full line of Norge household appliances.

# THE BIG THREE OF 1948

## NEW POST WAR MOTOR DRIVEN COILS



### DOM COOLER

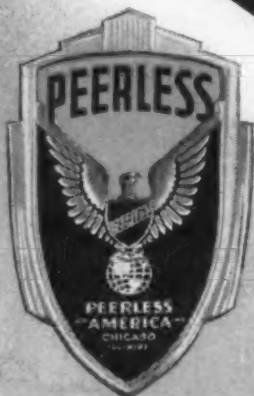
This forced air unit of nonferrous construction is entirely pre-engineered for simplified installation. It consists of a continuous circular off-center type coil and aluminum fins with copper tubing and integral capacity booster. Air enters bottom and is discharged radially from all sides. Cooler hugs ceiling, preventing direct air blasts. Occupies small space and delivers maximum BTU per dollar. For walk-in and reach-in coolers. Complete with built-in heat exchanger and suction spinner.

### UNIT COOLER

In this streamlined beauty the motor is mounted in the center of a ROUND COIL — the new Peerless "Pie Plate," where all primary and secondary surface, even return bends, are in the air stream. No waste surface. Gentle air velocities give efficient cooling with this condensed package of refrigeration power. For use in all type fixtures and walk-in coolers. Complete with built-in heat exchanger and suction spinner. Air is blown through coil discharging horizontally.

### CASCADE "IT'S PEERLESS MADE"

Here radiant cooling and convection cooling are combined for the first time, the casing of this motor-driven unit being used as cooling surface. Fins are attached to rear of front panel by copper tubing carrying refrigerant. Warm air is discharged downwardly from front of unit after being cascaded over coils. No blasts of cold air to dehydrate products! For reach-in, walk-in coolers and backbars. Handsome in polished aluminum and complete with built-in heat exchanger and suction spinner.



Sold Through Leading Refrigeration Wholesalers  
**PEERLESS of AMERICA, Inc.**  
2901 LAWRENCE AVE. CHICAGO 25, ILLINOIS, U. S. A.

## Driers and Strainers

A deluxe line of refillable and non-refillable Driers smartly styled, expertly engineered and double tested are now available in sizes ranging from 3 cu. in. to 50 cu. in. Also available are four different types of all brass Strainers. Complete information is contained in our new catalog, just off the press. Ask for your copy today.

Ask your Wholesaler for details on any Electrimatic item—Save time and money—Buy from your Wholesaler.

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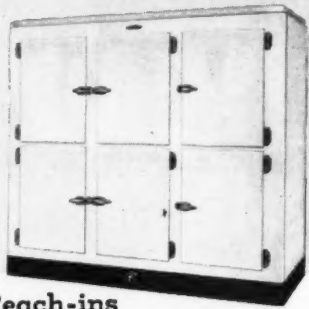
2100 INDIANA AVE. CHICAGO 45, ILL.  
CANADA—2025 ADDINGTON AVE., MONTREAL



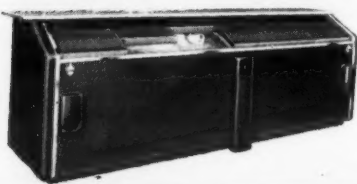
## SOME TERRITORY NOW AVAILABLE



Walk-ins that grow with the merchant's business



Reach-ins with coiling that is different



A Dry Beverage cooler with quicker cooling



**THE C. SCHMIDT CO.**  
CINCINNATI FOURTEEN OHIO

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PLYMOUTH • MICHIGAN

Makers of

REFRIGERATOR SHELVES • STAMPINGS  
FORMED AND WELDED PRODUCTS

Can you be satisfied with less than the best? In a refrigerator, that means Stainless Steel Shelves.

## INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from Page 1, Column 1) will naturally have to be economical and easy to obtain. In many cases they may prove to be definitely superior to the materials they replaced.

And, after the industry has worked with these substitutes for awhile, it may develop quite an affinity for them. Thus it may happen that steel and other now-scarce materials may find themselves crowded out of their biggest mass-production markets at a time when they'll need these markets most.

So, to prevent overcapacity in 1952, the steel makers had better protect some of their present markets, lest these markets be lost to steel permanently.

America needs more steel capacity. And, for their own best self-interest, the steel maker needs additional capacity, too.

## Substitute Materials:

## Standardization and Simplification

Progressively mounting appetites for sheet steel and kindred metals seem likely to cause repercussions in the electric appliance industry—if these hungers aren't satiated quickly. Industry informants tell us that the next moves in this chess game will be to insist upon:

- (1) Standardization and reduction of the number of models.
- (2) Simplification of design.

(3) Radical substitution of materials.

All three, while working undeniable hardships on manufacturers, may have interesting results that can be cashed in on later. Let's consider these in turn.

Standardization means that all manufacturers will agree to turn out only a specified number of models of specified sizes and equipment. For example, it may be decided that only three sizes of refrigerators be produced. One hears talk of limiting production to 6 and 8-cu. ft. models. This is a move that many dealers—particularly the smaller ones—have long been requesting. And, if types of equipment and accessories are limited and prescribed, the big dealer with "acres" of showroom space will no longer have a marked advantage. Nor will the customer tend so much to "shopping around!"

In short, salesmanship will determine who gets the orders, rather than customer's whims and caprices, or sheer power of display.

Simplification will have further results not so apparent to the dealer or the customer. This move will have more to do with parts—the internal mechanism and the "hidden values"—than with outward appearance or features. Standardization agreements will be of great aid to the manufacturer of parts, and should result in mass savings to the entire industry.

As matters stand now, the engineering staffs of the complete unit manufacturers each are likely to demand that the component parts which are built by specialists in that field be especially designed. In most cases, it is claimed, standard parts could do just as good a job for all manufacturers.

We have great sympathy for the various engineering staffs, each of which is straining to gain an edge on competition by designing a distinctive system. Such varying designs, however, defeat the purpose of mass production, and result in necessarily higher costs.

As for substitute materials, herein lies the great adventure. Naturally, the manufacturer hesitates to foist some untried material on the public. Here is a situation, however, wherein the public must share some of the costs of pioneering—instead of the long-suffering stockholders.

If strange materials are tried in electrical appliances—and if these materials do not result in altogether

inefficient operation—the public is expected to be tolerant, for it should be acquainted with the reasons for substitution.

However, the bright young men in certain engineering departments are currently sending chills down the backs of manufacturers with their blithe suggestions for substitute materials. Few of them realize, of course, the enormous difficulties involved in retooling for new materials, or how each substitution throws the whole system out of balance. But they keep on trying. Possibilities for substitution for scarce sheet metals include:

- (1) Plywood
- (2) Plastics
- (3) Glass
- (4) Ceramics
- (5) Aluminum

The notion of pouring concrete refrigerators is fantastic, of course. Concrete bases for commercial condensing units might not be far beyond the boundary of sanity, but the idea of trucking around concrete refrigerators deserves mention only as an example of the lengths to which some imaginative minds are going.

Plywood, however, is a different story. It's use in washing machines, household and commercial refrigerators is a distinct possibility. Employment of plastic parts will increase tremendously in the condensing-unit business. Plastic ice trays now appear to be feasible, too. And all-plastic cabinet is just around the corner (even though shortages in basic plastic materials are noted).

Glass, too, will play a larger role in appliance fabrication. Glass shelves are already "wanted" equipment in refrigerators. Glass accessories, parts, and even cabinets are proposed.

And aluminum, of course, is in the saddle. It is being substituted for steel in door liners, cabinet liners, shelves, range ovens, trays, and where-not.

The aluminum people have a golden opportunity at this time.

## Good Red Meat

In the December, 1947 issue of *Tell* magazine appeared the following editorial:

"Americans built a remarkable country and a fabulous economy on a foundation of individual initiative fortified by the willingness to take a risk. But now, perhaps unwittingly,

(Continued on next page)

## How can you possibly beat Bundyweld\* for refrigeration tubing?

Ever get a good look at Bundy Tubing?

Let the Bundy Gremlins escort you along a length of Bundyweld . . . and show you the features that make this amazing tubing better than any other for refrigeration uses. Ready?

BUNDYWELD IS STRONGER  
... IT'S DOUBLE-WALLED  
FROM A SINGLE STRIP

BRIGHT AND CLEAN,  
INSIDE AND OUT

LOW IN COST

ALWAYS HELD TO  
CLOSE DIMENSIONS

THINNER WALLS,  
FASTER COOLING...  
YET EQUAL STRENGTH

FABRICATES  
EASILY, QUICKLY

Did you catch that phrase, "double-walled from a single strip"? That's the key . . . exclusive with Bundyweld! Because of its special construction, only Bundy Tubing gives you these features just made for use in condenser and evaporator coils, compressor lines, connecting tubes!

How can you beat Bundyweld? Frankly, we don't think you can. So whatever your tubing needs, contact your nearest distributor or representative (listed below) . . . or write: Bundy Tubing Co., Detroit 14, Mich.

**BUNDY TUBING**



## WHY BUNDYWELD IS BETTER TUBING

1 Bundyweld Tubing, made by a patented process, is entirely different from any other tubing. It starts as a single strip of basic metal, coated with bonding metal.

2 This strip is continuously rolled twice laterally into tubular form. Walls of uniform thickness and concentricity are assured by close-tolerance, cold-rolled strip.

3 Next, a heating process fuses bonding metal to basic metal. Cooled, the double walls have become a strong, ductile tube, free from scale, held to close dimensions.

4 Bundyweld comes in standard sizes, up to 3/4" O.D., in steel, Monel or nickel. For special sizes or tubing of other metals, call or write Bundy Tubing.

## BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES:

Standard Tube Sales Corp. Peirson-Deakins Co. Lapham-Hickey Co. Ruton & Co. Pacific Metals Co., Ltd. Eagle Metals Co. Alloy Metal Sales, Ltd.  
76-01 Woodhaven Blvd. 823-824 Chattanooga Bank Bldg. 3333 W. 47th Place 404 Architects Bldg. 3100 19th St. 3628 E. Marginal Way 861 Bay St.  
Brooklyn 27, N.Y. Chattanooga 2, Tenn. Chicago 32, Ill. Philadelphia 3, Pa. San Francisco 10, Calif. Seattle 4, Wash. Toronto 5, Canada

Bundyweld nickel and Monel tubing is sold by International Nickel Company distributors in all principal cities.

## USE HEAT-X AND BE SURE of MAXIMUM EFFICIENCY and MINIMUM MAINTENANCE

Water Coolers

NO FREEZE-UP  
NOTE ALUMINUM  
CASTING

Soda Coolers

SILVER SOLDERED  
FITTINGS, NO TWISTING

Beer Coolers

COPPER TUBING  
FOR REFRIGERANT

Cooler Carbonators

STAINLESS OR COPPER  
TUBING COILS FOR  
LIQUID

LIQUID AND REFRIGERANT  
CANNOT  
LEAK INTO EACH OTHER

Heat Exchangers

Simple, Sanitary, Compact. They require but small refrigerant charges. Sanitary operation. All tubing embedded in aluminum.

**THE HEAT-X-CHANGER CO., INC.**  
415 Lexington Avenue, New York 17, N.Y. Brewster, N.Y.



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from preceding page)

business is allowing that once-rugged foundation to weaken.

"As businesses grow big, many grow ponderous. They pay more heed to safeguarding what they have than to reaching for more, because reaching involves risk. The result, in the opinion of many observers, has been a debilitating trend toward timidity and a parallel submergence of the individual's importance.

"Business has slipped almost imperceptibly into an involved system of checks and balances against making mistakes, which usually means checks and balances against making decisions. Companies by the score have replaced hell-for-leather leadership with a hypercautious rule by group or committee. And the more we insist on safety, the more we stultify our natural flair for taking the risks that make business tick.

"Such a process is particularly dangerous as it affects the marketing field, for here, preeminently, business relies on the performance of a crew of individualists. The resourceful salesman is almost inevitably a non-conformist. The whole advertising profession is studded with them. Stifle their worth—and their force—as individuals and you've gone far toward sabotaging the whole system.

"No sale is ever consummated between individuals unless each man is empowered with freedom to act in a give-and-take transaction—with the courage and authority to reach a decision and make it stick. When we force both parties to submit their judgment to the full board, haven't we impeded that sale with possibly fatal obstacles? And haven't we picked away another piece of mortar from the foundation of our whole economy?

"Many elements of business today seem to be approaching their tomorrows—we hear they're going to be competitive—with their gaze fixed over their shoulders. Management seeks guidance from a sales executive who hasn't seen a customer in five years. Before he can answer, he consults past history.

"The trend is insidiously contagious; even top management displays a reverent awe of experts and a downright dread of government regulation.

"It's probably over-simplification to say that the trouble is simply regimentation. What's really needed is a shift to more courage, away from excessive fear; it's more independence, a re-assertion of emphasis on the personal element of business. Is there any other element?

"It seems to be up to sales-minded marketing people to do a spot of torch-carrying."

### When You Have Orders to Burn

Best figure of speech describing the odd merchandising situation which exists presently is the quip that nowadays dealers are giving cigars and bottles of soothing syrup to distributors and manufacturers.

"Take this more comfortable chair," beams the dealer, much as it hurts his case-hadrened face to beam. "I'm sending a case of Scotch over to your hotel room. And now, when can we get deliveries?"

The wise distributor and the wise manufacturer know that this situation is but temporary. They know also that this is a time to build good will. They won't kick in the teeth those good relationships which have been nurtured down through the tough years behind (and which will come again—sooner than you think, perhaps).

They won't be like one small

manufacturer whom the editor interviewed the other day. Said this shortsighted man, whose plant is booked to capacity for a year ahead: "Hell, I don't even bother to make deliveries any more. If they want the stuff, they can come over and get it—and wait in line for it, too, by gum!"

This same manufacturer used to bombard his prospects with direct mail, personal calls, salesmen, and entertainment. His prospects, we predict, will remember that, and will remember even better this manufacturer's present attitude.

Salesmanship, advertising, and promotion today should be directed toward tomorrow's customers. To paraphrase George Washington, in time of war, prepare for peace.

### Now Is the Time To Make Friends

If purchasing and production problems have made delivering the goods harder than getting the order, now is the time for telling the world about your company through your advertising and promotion, and for making friends. Now is the ideal time for an institutional promotional program.

Most of us have longed for the chance to tell all about our firm, to indulge our pride in letting others know our worthy history and idealistic policies. In previous years, we have had to sacrifice such pride, and let our promotion efforts stick to a full-time job of producing immediate income. Now we can and should enjoy the indulgence of talking about our own company, what it stands for, and what it means to the "trade."

Our customers, our stockholders, our employees, and the public in general, all at times want to know more about our histories and our principles. To maintain and build goodwill during a trying period, let's tell all; and in planning our institutional programs, let's be sure to do a real job of presenting the story.

The first step is to lay out your institutional promotion program in general terms; and this first step is the most important one—for once the theme is chosen, the rest follows naturally and easily.

Cross-examine the "elder statesman" of your company as to its "character." An effective portrayal of this "character," dramatically presented, can form the basis for the whole institutional program. Ask yourselves:

How are you unique as a business enterprise? What distinguishes you from all others in your field? And how has your experience or position in your industry affected the quality and range of your products and service?

What have you done to promote the general welfare? What has your contribution been, in taxes, in employment, and in cooperation with public and private enterprises, to promote public health and to forward civic betterments?

Tell us about any research you have done to improve industry methods and standards or to raise the standard of living. What did you do, and how did you do it?

What have you done, alone or in cooperation with other businesses or agencies, to improve trade practices or conditions in your industry—improvements which have been beneficial to your customers?

If you have paid attention to industrial relations, how have your labor policies contributed to industrial peace and harmony?

And, finally, just what kind of company are you? Have you high ideals, high principles? What are they, and how are they socially and economically beneficial?

When you have the answers to these questions, in all probability even you will be surprised at how much there is to admire about your company, and you will have the material for the most fundamental part of your institutional promotion program.

Next, consider your product. Perhaps you find real drama in the circumstances—the struggle and the final triumph—of your product's invention and development. There is likely another story of interest in your raw materials—their sources, methods of selection, and testing.

Check over your manufacturing processes too—your plant and equipment, maintenance of standards—and watch for any unusual operations. And don't forget your product's record in service, and the record of

its present and possible uses, as a source for dramatic portrayal of your company's place in industry.

Your distribution policies may need to be explained, in terms of price ranges, channels of distribution, warehouse system, servicing, and plans for sales services and field service expansion.

Probably the most interesting stories built around your organization will be related to your personnel.

People are nearly always interested in other people. So, in planning your institutional program, be sure to include the saga of your founder, with emphasis on his aims and standards and ideals. Tell about your present management, and the principles by which they direct your company's activities. Build a story around your production staff and the backgrounds of its key men. Remember that your research staff

is an especially good source for promotion material.

Tell all about your policies, plans, and personnel in your advertising and then, when customers and prospects begin to know and understand you, they will like you, even if you can't deliver their orders by the end of next week.

In brief, humanize your firm. It will pay dividends later on when sales are hard to get.

## ASSURED PERFORMANCE in Reach-in Refrigerators

Recognized as quality products SHERER

Reach-in Refrigerators will continue to be built to the same high standards that have earned them their present outstanding position in the industry.



VEGETAIRES • DAIRY CASES • REACH-IN

REFRIGERATORS • WALK-IN COOLING ROOMS •

MEAT & DELICATESSEN DISPLAY CASES •

One member of a complete quality line... designed to be salable in volume at a profit.

## Pickin' 'em Off!

Repair jobs coming up on your schedule? Bowl 'em over neatly... with parts that are quality-built and completely dependable!

You can choose from a complete stock of the finest refrigeration parts... competitively priced... at any of the 50 Kelvinator parts depots.

You'll like the fast, accurate, and friendly service of your local Kelvinator parts depot. Order by mail, phone, or in person... Kelvinator, Division of Nash-Kelvinator Corporation, Detroit, Michigan.

### GET YOUR COPY New Handy Catalogue of Refrigeration Supplies

Here's a quick, convenient guide to what you need in the way of refrigeration supplies. Complete your inventory from this big, new, illustrated catalogue. Parts numbers, specifications, and prices are grouped for easy reference. Ask for it at your nearest Kelvinator distributor's or Zone Office.



# Kelvinator

CONDENSING UNITS

REFRIGERATION PARTS AND SUPPLIES



BUY KELVINATOR FOR ALL YOUR REFRIGERATION REQUIREMENTS

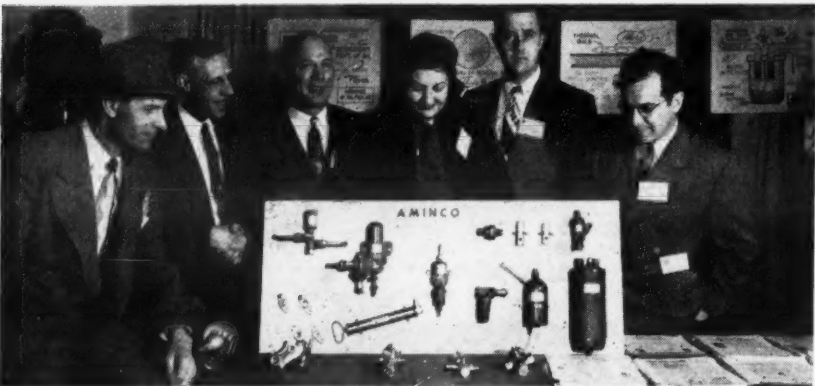
**PURO Electric**  
WATER COOLERS  
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**PURO FILTER CORP.**  
OF AMERICA  
DRINKING WATER SPECIALISTS  
FOR 50 YEARS







T. G. Thomas, sales manager for Schnacke, Inc., outlines some features of the latest version of the firm's Model E 8-cylinder compressor (25 to 50-hp.) for Willis E. Reed, Utilities Supply, Cicero, Ill.



Oil separators, valves, floats, and other refrigeration accessories were shown by the newly formed Aminco Refrigeration Products. Ed Kellie (second from left) and John Trix (far right) are principals in the company. Others in the picture are R. J. Hayes, Gus Larson, Mrs. Robert F. Jues, and George B. Boone.

## Presented at Industry Show



An airfoil-type grille claimed to provide a wide range of adjustment for quiet and correct air delivery was a new item shown by Chrysler Airtemp.

**Editor's Note:** There were 175 exhibits at the All-Industry Refrigeration and Air Conditioning Exposition. The editors of the NEWS, in this and the following issue, will make an all-out effort to try to present a story or a picture-story on most of the new items or other things that made news at the Show.

We will not try to describe all of the booths, many of which were of unusual and elaborate design. But if any exhibitor, after reading this and the following issue, believes we have overlooked a real piece of news in his exhibit, we hope he'll tell us about it so we can report it.



It's not a radio message, but an electronic signal warning of a refrigerant leak that interests Dan Wile of Refrigeration Engineering, Inc. as J. S. Hickey of the General Electric Co. Apparatus Division engineering department demonstrates the leak "sniffer" that will detect leaks as small as 1/100th of an ounce per year.



Members of the industry had a chance to express their opinion on product design by actual ballot in at least one booth. Wid Siegfried (left), vice president and general manager of Superior Valve & Fittings Co., watches as Leon Aronson of Refrigeration Equipment Wholesalers, Philadelphia, casts his ballot as to whether he prefers driers with a plain brass finish or the copper lacquer finish, and also whether he would prefer 1/8 in. FP or 1/4 in. FP gauge tapping in gauge manifolds.

# HEAT TRANSFER PROGRESS

(a continued story)

- Behind this modern exterior stands one of the most progressive plants in the industry. Here Marlo coordinates efficient manpower, methods and machines into ever higher quality, lower cost production. Result: more and more value for your heat transfer dollar.
- In this series of messages we'll take you "behind the scenes" to show you why...

**Marlo**

IS THE MARK OF HEAT TRANSFER PROGRESS

MARLO-HEAT TRANSFER  
Since 1925

MARLO COIL CO. / ST. LOUIS 10, MO.

## "P-H" REACH-IN CABINETS SAVE FOOD!



Model P-65,  
Solid Doors

Model P-42,  
Glass Doors

### Patented Grad-U-Matic Air Conditioning Cuts Shrinkage and Spoilage to the Minimum

You can help conserve food with better food preservation equipment. Puffer-Hubbard reach-in refrigeration cabinets reduce shrinkage, spoilage and discoloration losses to the minimum by providing the correct control of temperature, humidity and air circulation. Available in 2 to 8 door models with solid or glass doors.

Write for  
INFORMATION

#### Get These Plus Engineering Features

- Electric Welded Steel Frame
- Welded Interior Porcelain Lining
- Porcelain Exterior
- Exclusive Grad-U-Matic Air Conditioning



**PUFFER-HUBBARD**  
MANUFACTURING COMPANY

GRAND HAVEN, MICHIGAN EST. 1898

"The Mark of a Good Case"



## Keeping Locker Renters Happy:

### Easy-To-See Chart Shows What They Save Annually on Frozen-Stored Food

MANHATTAN, Kans. — Because rising costs of living are so high that many people are giving up refrigerated lockers to save the rental charge, it is essential that the locker operator do everything possible to "keep his customers happy" at present, according to Arthur Peine, manager of Iceway Food Lockers Co., here.

Iceway Food Lockers is pointing out to all of its customer that the rental charge of from \$15 to \$20 a year for various types of lockers is actually well absorbed by the food savings made possible through bulk purchases. A chart, which shows relative savings for meat, produce, fruits, poultry, fish, etc., if carefully bought and stored in the lockers, has been hung up at the entrance to the locker-room—where every customer is bound to see it.

Many women who feel that they would save \$17.50 a year by giving up their refrigerated locker thus are taught that they are actually saving something like \$35 a year on a single staple food item through the use of the locker.

That's one goodwill service which the plant uses. Next, Peine has striven consistently to do away with all the "unpleasant" factors in using the storage locker. Thus, he provides immaculately-clean, wool-lined white coats, convenient to the entrance, where the customer may slip one on, keep comfortably warm even if she spends a half an hour or more in the locker-room, and return it to its peg after use.

"A lot of people have fantastic notions about the danger of going from one extreme of temperature to the other, particularly in the summer months," Peine indicated. "However, simply by providing a coat ready for use, we have done away with such fears."

A third goodwill step has been a system whereby the inevitable customer who "forgot his key" can still be serviced. Having to return home for the key in order to get into the locker is a frequent source of irritation and loss of goodwill, according to Peine. Therefore, a special key cabinet, divided into 7 vertical sections, 5 ft. high, has been set up, with one peg corresponding to each locker in the locker plant.

Each vertical section also represents a specific bank of lockers, so that it is easy to locate in numerical sequence the particular key for a particular locker, merely by counting from No. 1 on. This is installed next to the service window, and has a pigeon-hole rack at the bottom in which slips showing whether the customer is paid up on locker rent, etc., are posted.

Now it is no longer necessary for the customer to carry a key. She

merely requests it at the service window, and the girl in charge quickly locates the key, checks the name below the peg, and turns it over. The customer signs a "locker key slip" which is left in the clerk's possession at all times while the key is off of its hook.

When it is returned at the end of the visit, the key slip is discarded. Thus, customers are saved all of the bother and worry about the necessity of keeping a locker key on their persons.

Iceway Food Lockers has adopted many other innovations, including high-speed vegetable processing, game storage for hunters and fishermen, and specialty processing for particular flavors and tastes, Peine reported.

## J. J. Booth Gets Promotion Post at Cordley & Hayes

NEW YORK CITY — James J. Booth has been appointed manager of advertising and sales promotion of Cordley & Hayes, Inc., manufacturer of water coolers.



James J. Booth

Previously, Booth was account executive with the Ralph H. Jones Co., advertising agency, where he handled, among other accounts, that of the National Electrical Manufacturers Association.

Along with this appointment, C. M. Cordley, president, announced his company's new program of advertising, claimed to be the most extensive in its history. The five-year-warranty plan of the new model will be stressed in the promotion.

## Salad-Laden Carts Wheel from Inside Big Walk-Ins Right to Hotel Banquet Halls

WASHINGTON, D. C.—One of the most unusual food service refrigerators in use in the country has been installed in the second floor banquet kitchen of Hotel Statler here.

Operating eight large private dining rooms, including the world-famous Presidential Room and Congressional Room, the management of the Statler elected during construction of the hotel to provide entirely separate banquet food service facilities, to alleviate possible overstraining of the regular kitchens on the first floor. Therefore, a banquet kitchen capable of serving 3,000 people at a sitting is permanently located on the second floor. This kitchen, with its own refrigeration and cooking equipment, goes into service wherever 500 or more people must be served, while the downstairs kitchen takes care of lesser amounts. On the rear wall of the banquet

service kitchen is a huge refrigerated unit, which consists of nine 6 x 7 x 5 ft. compartments, each of which has two swinging doors. Neatly fitting into each refrigerator is a 6-level stainless steel cart, running on tracks, which can accommodate up to 1,200 salads, desserts, etc. The refrigerator unit is kept cooled to 35° F. by four condensing units, with coil-and-blower unit placed along the interior.

In preparing for banquets, either the downstairs kitchen, or the upstairs banquet kitchen, makes up all salads, frozen desserts, and ice cream in advance on the stainless steel carts, which are then wheeled into the refrigerators and kept on tap until needed.

Since ramps have replaced stairways throughout the corridors, carts may be wheeled directly to the point at which the foods are to be served.

# Freezing Facts by Super

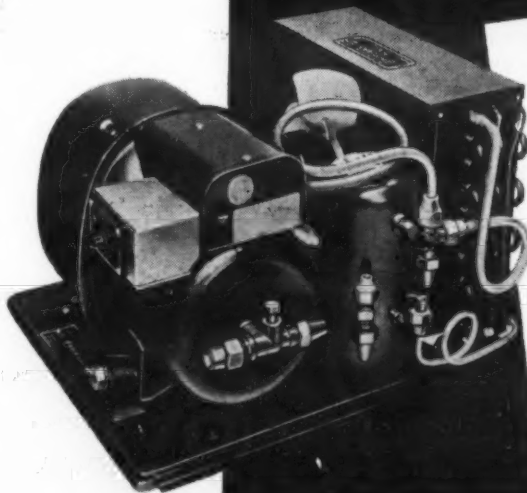
## Betrothals and Bores

TO WOMEN, diamonds have meant "tops in romance" ever since a 15th-century Venetian first set one in a betrothal ring. Now every bride wants a diamond—and, statistics show, three out of four get one.



To a mechanic, diamond means "diamond boring"—a term that describes tops in precision machining. Crankcase cylinders for Servel Supermetics are "diamond-bored" to precise tolerances.

"Diamond boring" is just one of the many high precision operations that assure longer life, low operating cost, and high customer acceptance for the Servel Supermetic. These condensing units are made in all types and sizes for every application. Send for free copy of "Servel Supermetic." Address Servel, Inc., Division ER, Evansville 20, Indiana.



Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field:

1. Store Fixtures
2. Milk Coolers
3. Home Lockers

4. Beverage Coolers
5. Vending Machines
6. Room Coolers
10. Vehicle Refrigeration

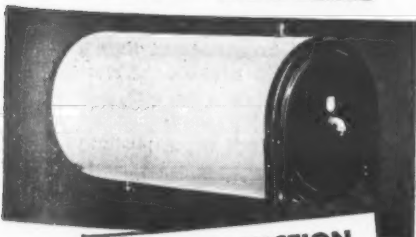
7. Farm Freezers
8. Water Coolers
9. Industrial Cooling

# Servel

## SUPERMETIC

### REMOTE

### WATER COOLERS



### NORMAL SUCTION PRESSURE

For drinking water bubbler service, glass filler service, photographic developing, etc. Compact for floor, wall or ceiling installation. Capacities 6 to 25 gallons.

Also available now — cafeteria glass filler coolers, self-contained type bubbler coolers for offices, stores or factories. Write for latest data.

**DAY & NIGHT**  
**REFRIGERATION DIVISION**  
**DAY & NIGHT MFG. CO.**  
One of the Dresser Industries  
MONTROVIA, CALIFORNIA  
SOLD THROUGH REFRIGERATION WHOLESALE AND DEALERS



## New Data Booklet Covers Freezing of Ice Cream

NEW YORK CITY—Current refrigeration problems in connection with cooling ice cream mix during the manufacturing process and methods of freezing and hardening the finished ice cream are authoritatively discussed in an Application Data Section recently published by The American Society of Refrigerating Engineers.

The seven page pamphlet was written by Chester J. Bell, manager of the Portland, Ore. branch of The Creamery Package Mfg. Co., and chairman of the ASRE Technical Committee on Dairies and Allied Industries.

Designated Application Data 41, the brochure contains definitions of hardening, freezing, aging, homogenization, etc.; arrangement of equipment required for the manufacture of ice cream; distribution of ice cream mix to retail outlets; and refrigeration requirements—temperatures necessary in the various manufacturing steps.

Copies may be obtained from ASRE headquarters, 40 West 40th St., New York 18, N. Y., for the price of 35 cents each.

## Trio Incorporates Cold Pad

LOS ANGELES—Refrigerated Cold Pad Co. has been incorporated in Los Angeles County, with 2,500 shares of no par value capital stock. Principals are: J. C. Hall of Santa Monica, Calif.; and C. R. Clapp and Josephine Clapp, both of whom are from Los Angeles.

## 8 Distributors To Handle Whiting Freezers In West, South, and Midwest

CHICAGO—Appointment of eight new distributors for Whiting food freezers has been announced by Howard Roberts, vice president in charge of the refrigeration division of the Whiting Corp. here.

In the south Williams & Shelton Co., Inc., Charlotte, N. C. will represent the company in North and South Carolina. Distributor for Virginia and parts of Maryland and North Carolina will be the Norfolk Distributing Co. of Norfolk, Va. Southwest Texas will be represented by Marshall Webb Distributing Co., San Antonio, Tex.

For the greater Chicago area Wakem & Whipple, Inc. of Chicago has been appointed, and the Miami Valley Distributing Co., Dayton will cover the Dayton market. Mueller & Selby, Inc., Omaha, Neb. has been assigned to the Nebraska and western Iowa territory.

In California Whiting freezers will be distributed in the northern section by Ceazan Co., San Francisco, and in the southern section by U. S. Grant Supply Co. of Los Angeles.

## Veteran Opens Watertown Shop

WATERTOWN, N. Y.—H. Michael Strauss has opened a new electrical appliance store at 573 State St. He is a veteran of World War II and prior to entering the service was associated with several electrical stores here.

## Ace Cabinet Corp. Sales Offices Moved to Plant

NEW BEDFORD, Mass.—Ace Cabinet Corp. is moving its sales department from New York City to the newly acquired plant in New Bedford, Mass.

Nelson S. Bloomenstien, sales manager of Ace, moved to his new quarters Jan. 30, and all correspondence should now be addressed in care of the Ace Cabinet Corp. at New Bedford, Mass.

"Location of our sales office right in the plant," said Bloomenstien when announcing the change, "will mean faster service for our customers. It is a logical step in our expansion program."

## General Controls Picks 3 Factory Branch Managers

SAN FRANCISCO—J. F. Ray, director of sales for General Controls Co. here recently announced three factory branch manager appointments.

Don S. Bentley, formerly a factory sales supervisor for the company, will head the Los Angeles branch. F. E. Weldon, who has been with the company in the capacity of American Gas Association representative, will be branch manager of the New York office.

The Detroit factory branch will be managed by C. G. McCarthy, who has an extensive background in the electrical, mechanical control industry, the statement said.

## Tests Show What To Watch for:

## Importance of Thawing Frozen Foods Properly Is Stressed In College Project

STATE COLLEGE, Pa.—"A big advantage to freezing is the time it saves the homemaker. She can preserve as much food in two or three hours as it would take a whole day to can."

That conclusion was reached by a Pennsylvania home economics student after completion of a summer food freezing project.

Her findings were reported to the third annual frozen food conference sponsored by the Pennsylvania State College here last fall, by Lillian Buckingham of the department of home economics, State Teachers College, Mansfield, Pa.

The student, Betty Bohlayer, related in her project report:

"We have frozen a large variety of fruits and vegetables. The only vegetable we do not like frozen is carrots—they become tough and rubbery."

"We have successfully frozen bread, rolls, cookies, cake, muffins, and pies. We preferred pies that were baked before freezing. The crust was flakier and more tender. I tried freezing them baked and unbaked."

"The sugar in the unbaked fruit pies dissolved partially in the fruit juice and because a concentrated sugar solution will not freeze at 0°-10° F., it would leak out of the pie no matter how careful I was with

the crust.

"I prefer to freeze my pie filling in boxes and then make the pie crust fresh as wanted. Less storage space is required which is often quite an item in a freezer."

"Proper thawing is very important. Many vegetables are of better flavor and quality to put the frozen block of vegetables directly into boiling water and cook. Some fruits are better thawed at room temperature."

"However, to thaw blueberries at room temperature makes them tough for it takes so long to freeze. Put the package of frozen berries into a pan of warm (110° F.) water. About 15 minutes is required to thaw them this way."

"They should still be very cold and served immediately. No fruit can be more delectable. Peaches and strawberries can be thawed by this method, if you are in a hurry to use them."

"With our home freezer, we often bought pineapple and jam and other foods in No. 10 cans. When we opened the large cans, we transferred the food to glass pints or quarts according to the size of container we wanted and froze the jam or whatever until we could use it up."

"We used glass cans to freeze in but the cans do not stack well. We preferred square or rectangular boxes."

## Frozen Turkey, Sliced Into Steaks, Yields More Meat, Year-Round Item

LINCOLN, Neb.—Experiments now are being conducted in the preparation of boned frozen turkey steaks at the University of Nebraska College of Agriculture as a means of making turkey a year-round food staple rather than a holiday's specialty. The method being employed consists of removing the meat from the bones, separating the white and dark meat, freezing and cutting into steaks.

Research both at the college here and at the Curtis school of agriculture in Western Nebraska has emphasized turkey steaks as one means of making turkey meat more acceptable to the public, with refrigeration the chief tool of the project.

There is 25% more usable meat on one-half of a 24-pound turkey than on a 12-pound bird, and often the larger bird is much cheaper per pound than the smaller turkey.

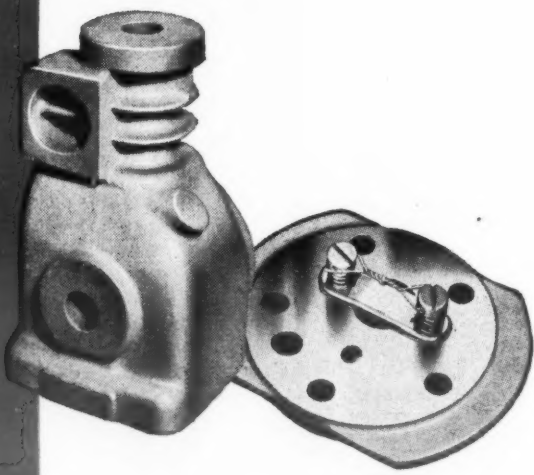
I. L. Williams and H. L. Wieggers of the Nebraska college pointed out that "the larger bird can be preserved and served in the form of steaks, either by the fillet method or by frozen, sawed steak method, or both, with considerable advantage to the housewife, both in saving and convenience."

H. K. Douthitt, superintendent of the Curtis school which pioneered the turkey steak idea, declared that a study in the preparation of 30 tons averaging 32½ pounds, indicated the retailing of turkey steaks is highly practical. It was found that a 32½-pound tom, cut into 4 to 4½-ounce steaks would produce 29 steaks of white meat, 17 steaks of dark meat, while the wings, neck and giblets offer possibilities both to the retailer and the housewife looking for a low cost meat.

A successful method developed at the college is to freeze the carcass and saw it into steaks three fourths of an inch thick, using either a hand or power driven saw. If the birds are extremely large (25 pounds and up) the carcass may be split in half along the longitudinal axis and each half cut into steaks. About 75% of the carcass can be cut into steaks, while the other parts can be used as stewing turkey or other ways.



## EATON PERMANENT MOLD GRAY IRON CASTINGS



## Meet Critical Requirements for Refrigeration Parts

Free machinability, dense non-porous structure, freedom from leakage under pressure, freedom from distortion, ability to take a mirror finish—these are qualities which recommend Eaton Permanent Mold Gray Iron Castings for a wide range of applications in refrigeration and other domestic appliance production.

Millions of Eaton Permanent Mold Gray Iron Castings are used annually for such critical parts as refrigeration valve plates, pistons, connecting rods, crankshafts, cylinder blocks, cylinder heads, bearing retainers, pump bodies, and many others.

The non-porous structure of Eaton Permanent Mold Gray Iron Castings makes them capable of holding liquids and gases under high pressure without leakage. Proper annealing insures that the castings will hold size and not distort after machining.

Eaton Foundry Division engineers will be glad to work with you in adapting Permanent Mold Gray Iron Castings to your own products. Send for your copy of the illustrated booklet, "A Quick Picture of the Eaton Permanent Mold Process for producing Gray Iron Castings."



THE EATON PERMANENT MOLD MACHINE IS A SYMBOL OF THE QUALITY OF GRAY IRON CASTINGS PRODUCED BY THE PERMANENT MOLD PROCESS.

**EATON**  
MANUFACTURING COMPANY  
FOUNDRY DIVISION

9771 French Road • Detroit 13, Michigan

**Lipman**  
AUTOMATIC REFRIGERATION

For year-in and year-out DEPENDABILITY, LIPMAN refrigeration is second to none. Low cost of operation and maintenance assures repeat sales which mean greater profits. Units available in sizes from ¼ thru 40 H.P.

**GENERAL REFRIGERATION**  
DIVISION  
TAYLOR AMERICAN MACHINE CO., BRIDGEVIEW, ILL.

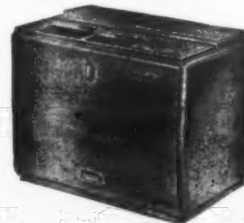
## Let's Go...NATION WIDE...

### ALERT DISTRIBUTORS AND DEALERS

WILL BE FRANCHISED • BUYERS EVERYWHERE  
—FOR BUXTON'S THREE GREAT NEW REFRIGERATORS •  
NEW STREAMLINING • NEW ENGINEERING FEATURES

SO COMPACTLY DESIGNED THAT THE SPACE REQUIRED IS ABOUT THAT OF THE AVERAGE 12 Cubic Foot Refrigerator, but you actually get a Refrigerator with 22 Cu. Ft. normal temperature . . . the Combination Refrigerator is 19 Cu. Ft., half Zero—and half normal and the all Zero refrigerator is 18 Cu. ft.

—And the BUXTON DRY Cooler for bottled beverages and food products.



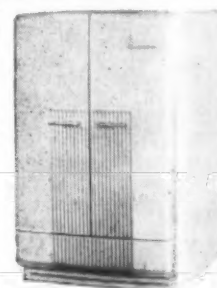
All inquiries will be personally contacted within a few days.

Manufactured by

**BUXTON, INC.**

1960 E. 48th St. Phone LUcas 8158 Los Angeles (11) Calif.

General Sales Manager, E. George Sanders  
3120 N. Main St., Dayton 5, Ohio





## NARC Defers Action on Licensing Code--

(Concluded from Page 1)

expired term of William G. Euth, also of Detroit, as a director at large.

Terms of the remaining four directors do not expire until October, 1948. They are Lampie, representing region 3; C. R. Faulkner, of Longview, Texas, representing region 5; and W. L. Drake, of Indianapolis, and Lee Shirar, of San Francisco, at large.

One of the most important changes in the revised constitution makes NARC an international organization. This change authorizes the association to accept contractors in any part of the world as official members, at the discretion of the board.

Main reason for this was to permit Canadian contractors to become legal members. Prior to the change, they had been ex-officio members.

Under another amendment proposed from the floor by Frederick R. Bolton, of Detroit, and approved by members, the immediate past president automatically becomes a member of the board of directors.

The code of business ethics was approved subject to changes in two sections dealing with prices. Rephrasing of these sections were to be worked out by the legislative committee prior to release of the code for publication.

In addition to rules regarding prices and related points, the code covers unfair interference with present customers, customer complaints, signed orders, and maintenance advertising.

Action on the proposed standard administrative licensing code was postponed because of insufficient time to examine its contents carefully. The code was referred back to the legislative committee.

During the meeting, it was announced that a new association formed by Iowa contractors had been accepted as an NARC affiliate. This brings the number of such affiliated groups to 24. It was also reported that new groups are being formed in Denver and Canton, Ohio, and that conferences were held with contractors from Baltimore, Texas, Washington, D. C., Toronto, Montreal, and Vancouver who are interested in establishing local associations.

Among the subjects taken up in officers' talks and committee reports was the need for a standard guarantee to protect the contractor against contingent liabilities. It was stressed that the contractor should not have to assume the responsibility for damages resulting from defective parts.

Emphasis was also placed on the expense to the contractor of replacing faulty components. Speaking as chairman of the trade relations committee, F. J. Zoppel went into some details on the costs involved in such replacements under present warranty policies.

"The contractor not only has to underwrite his own mistakes but everybody else's," he declared. Protesting that "the law of the jungle still prevails in the industry," he asserted that this situation is a definite threat to the contractor's existence.

In reviewing accomplishments of the legislative committee, Chairman Edelstein presented a progress report on efforts of NARC to have commercial refrigeration exempted from provisions of the Fair Labor Standards (Wages and Hours) Act if 50% or more of the contractor's business is intrastate in character.

Recently in a personal conference with the Administrator's office, a brief was submitted to the Administrator which stated the position of the NARC," the report said. "Subsequently, a communication was received from the Administrator wherein for the first time (he) seemed to indicate that commercial

refrigeration was not to be covered . . . and should be exempt under 13 (a) (2) just as domestic refrigeration is exempt."

Further conferences with the Administrator are scheduled, according to Edelstein. He said the committee is "very hopeful" that the administrator will finally agree with NARC on this question.

Need for a national licensing code "if this industry is to be straightened out" was cited by Ed Wright in one of the several talks given at the meeting. To support his argument, he showed slides of installations considered sloppy, inefficient, and unsafe. These were contrasted with examples of what he termed safe, attractive, and efficient installations.

On display during the meeting was a "flight plan" of NARC's special "flying squadron" membership committee. It consisted of a map of the U. S. with lines showing points flown to by some of the members of the committee in air line and privately owned planes. Photographs of these members beside planes were included.

## NARC National Officers for 1948



The above group constitutes most of the present officers of NARC. Those seated are: (left to right) Nathan Edelstein, recording secretary; F. J. Zoppel, a director; Lee Shirar, a director; A. M. Palen, treasurer; L. C. Anderson, a retiring director; and James E. Perry, a director. Standing are: J. J. Helminak, executive vice president; H. E. Wheeler, first vice president; James Lessard, second vice president; Ed S. Wright, president; C. R. Faulkner, a director; and Warren W. Farr, a director. Officers not present for photo were: Ralph W. Lampie, sergeant-at-arms; and W. L. Drake, a director.

## Westinghouse Output Seen High This Year

BUFFALO — Production of home appliances by Westinghouse Electric Corp. is at a volume greatly in excess of the prewar level, and "we expect to carry on at this rate through 1948, or at least through the first half," Vice President Herbert H. Rogge of Westinghouse said in a talk before a meeting of dealers in Buffalo.

"Production has exceeded our hopes, in spite of material shortages," Rogge said.

## Bender Joins Sales Staff of Mueller Indianapolis Office

INDIANAPOLIS — E. J. Ludwig, manager of the local office of Mueller Brass Co., has announced the appointment of James Bender, formerly with Central Supply Co. here, to assist him in all sales of Mueller Brass products in the Indianapolis territory.

## Ferro-Therm opens the door to



Men who  
know  
insulation  
say

# Ferro-Therm

Reg. U.S. Pat. Off.

## STEEL INSULATION

Fully Protected by U.S. and Foreign Patents Issued and Pending



Page 3D-1, Engineering File

YOU can open the way to real savings in every type of refrigerated structure — by insulating with Ferro-Therm Steel Insulation.

Ferro-Therm saves *pay space* because it is made of thin, rigid sheets of steel which reflect 90-95% of all radiant heat — enabling it to provide efficient insulation with *half* the wall thickness required by mass insulation.

Ferro-Therm saves *refrigeration costs* because its heat storage capacity is extremely low — ensuring faster pull-down of temperature.

Take the first step now toward greater efficiency and economy — in cold storage and fur storage plants, test chambers, all-weather rooms, warehouses, locker plants — by getting the complete Ferro-Therm story. Just mail the coupon below.

AMERICAN FLANGE & MANUFACTURING CO. INC.  
Ferro-Therm Division, Dept. AC-2, 30 Rockefeller Plaza, New York 20, N. Y.  
Please send me, without obligation, complete information on Ferro-Therm Steel Insulation.

Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

THE INSULATION THAT *pays* — IN PAY LOAD AND PAY SPACE

**For COMPETENT PHOTOGRAPHIC SERVICE in the U. S. and Canada, deal with professional photographic studios which display this emblem.**

Get new 1948 Classified Directory free. Lists competent photographers geographically and by name, with key to special services. A big help when you need photographs from out-of-town. A request on your letterhead will bring this useful booklet.

Write to Charles Abel, Executive Manager, THE PHOTOGRAPHERS ASS'N OF AMERICA, 520 Caxton Building, Cleveland 15, Ohio



## WILSON

### REFRIGERATION, INC.

- FARM AND HOME FREEZERS
- REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS

DIVISION OF WILSON CABINET CO., INC.  
SMYRNA, DELAWARE

## THOMAS TRUCK

### of Keokuk

### Truck Wheels

Thomas easy-rolling rubber tired wheels are tough but resilient and will give many years of service. All sizes. Hyatt roller bearings with hardened outer race, grease chamber and Zerk fittings are standard in these wheels. Smooth steel hub caps optional. Write for catalog MC.

THOMAS TRUCK & CASTER CO.  
4836 Mississippi River, Keokuk, Iowa

Leading Indian Firm with excellent bank references dealing in machinery with facilities for sales and service is anxious to represent exclusively in India a prominent U.S.A. manufacturer of Ice Plants.

Please write to—

**K. G. KHOSLA & CO.**  
Engineers & Agents,  
22, SCHOOL LANE,  
NEW DELHI

## Regulation W Bogey

### Fear That Credit Controls Will Return Keeps Many Dealers Using Stiff Terms

CHICAGO—If you've been worrying about the reinstatement of Federal consumer credit controls, maybe you ought to stop. Chairman Jesse Wolcott (House Banking and Currency Committee) doesn't figure there'll be any.

His prediction, made here recently, came hard on the heels of a Senate resolution to authorize restoration of credit restrictions until June 30, 1948. No similar action, however, has been taken in the House.

Meanwhile, many dealers were faced with a dilemma. Supply of some radios and appliances was running ahead of demand—which ordinarily prompt an easing of credit terms. But with the danger of reimposed Federal credit controls still imminent, retailers felt this just wasn't the time to relax terms. They feared it would only spur pressure to bring back Regulation W, or a reasonable facsimile.

As one Detroit appliance dealer put it: "We're all being good boys now."

In keeping with this temperate view, most large stores in Philadelphia were reported to be asking at least 10% down and 15-24 months to pay. Washington, D. C. stores were even tougher. Two of them were requiring one-fifth as a down payment and the balance within a year.

Out on the West Coast one credit man voiced a gripe familiar in the easy-credit days: "There's been a

noticeable lag in payments," he said. "It's turning into a collection problem much like before the war."

Among higher income people, however, collection has been no problem at all, according to the experience of one exclusive Los Angeles department store. There seven out of 10 customers were paying off accounts within nine months.

## Cory Corp. Sets Up Canadian Subsidiary

CHICAGO—Cory Corp., manufacturer of coffee brewers and air circulators and humidifiers, has announced the formulation of Cory Corp. (Canada) Ltd., as a subsidiary firm.

The newly formed organization will manufacture and sell Cory equipment throughout the Dominion. Complete manufacturing facilities are being established in a plant with 7,000 sq. ft. of operating floor space located at 3300 Dufferin St., Toronto, Ontario.

Cory glass coffee brewers and brewing equipment were manufactured in Canada during the period 1937 to 1944. Operation was suspended during 1944 due to the unavailability in Canada of certain essential basic material necessary to continue the operation.

## Audible Advertising

Machine Automatically Plays Sales Message for Customer by Means of Magnetic Paper Tape

CHICAGO—A new medium of advertising to support present visual methods, and in some instances, to replace them through the use of the spoken word, has been made possible by the revolutionary new AudiAd, a small, compact magnetic paper tape playback machine, developed by Magnecord, Inc., manufacturer of professional magnetic recording and reproducing equipment here.

Here's how AudiAd works:

A customer walks into a department store and hears a pleasant voice announce the items for sale on that floor. At various counters, other AudiAds carry on, giving carefully planned sales tips on specific products.

A customer puts a coin in a vending machine, receives the merchandise, then hears an appropriate sales message.

Or a motorist drives into a service station, is welcomed by a voice from the speaker on the gas pump, then is warned of approaching weather changes requiring safety maintenance.

### PLAYS FOR MONTHS

The unit features a continuous loop of magnetic paper tape that can be played continuously for months without rewinding and with no loss of quality or increased surface noise or scratch, according to company claims.

The unit plays messages from five seconds to one minute in duration, over and over, or it will play a multiple of messages totalling one minute, stopping automatically after each short message. The loop of tape is contained in an interchangeable cartridge.

Messages can be easily changed and kept up to date by erasing the old message and recording a new one. On the units designed to playback only, the cartridge containing the magnetic tape can be removed and another cartridge containing tape with a new message can be snapped in place.

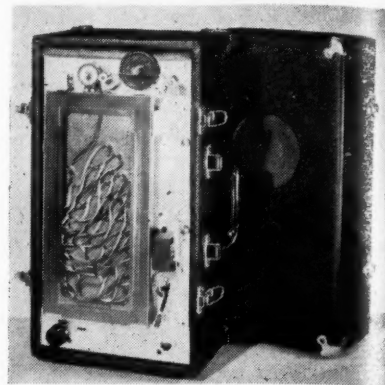
### TAPE GETS ATTENTION

Attention is attracted not only by the audible message, but also by the intricate patterns and folds of the endless tape falling into the cartridge.

AudiAd may be started automatically by breaking a beam of light, dropping a coin, pushing a button, or by any of the many other standard methods.

The unit is not meant to blare forth deafening volumes. It can if circumstances call for it, but the low level speakers are primarily intended to give soft personal messages to those in the immediate area. Toned to the volume of the normal speaking voice, the person addressed gets the impression the AudiAd is speaking only to him.

Stopping the AudiAd automatically at any desired point in a message is accomplished by merely punching



a small hole in the tape at the end of each message. A contact rides on top of the tape after it is started and when it drops into the hole, it touches the metal contact underneath the tape and automatically stops the unit. If no holes are put in the tape, the unit will run as long as the power is on.

The AudiAd has only four working parts: the motor, a drive shaft, a pressure roller, and a rubber puck. If new tape is desired, the cartridge can be easily reloaded.

## 4 More Firms Appointed Launderall Distributors

DETROIT—Signing of four new and additional distributors for the Launderall automatic washer is announced by the F. L. Jacobs Co.

The new distributors will take over certain parts of territories previously covered by present distributors, and will increase the total of Launderall distributorships to 62.

The four distributors and their territories are as follows:

H. G. Bogart Co., Inc., Toledo, is taking over the Toledo area which was formerly served by Welker Supply Co. of Detroit.

J. S. George Supply Co., Burlington, Vt., is now serving the state of Vermont which was formerly franchised to Fort Orange Radio Distributing Co., Inc., Albany, N. Y.

National Utilities Supply Co., Pittsburgh, is taking over the Pittsburgh territory formerly franchised to Radio Sound Corp., Baltimore.

Old Dominion Distributors, Inc., Richmond, Va., has taken over Richmond and the Western part of Virginia which was formerly served by Norfolk Distributing Co., Norfolk, Va., who remains Launderall distributor for eastern part of territory.

## 2 Open Farm Electric Store

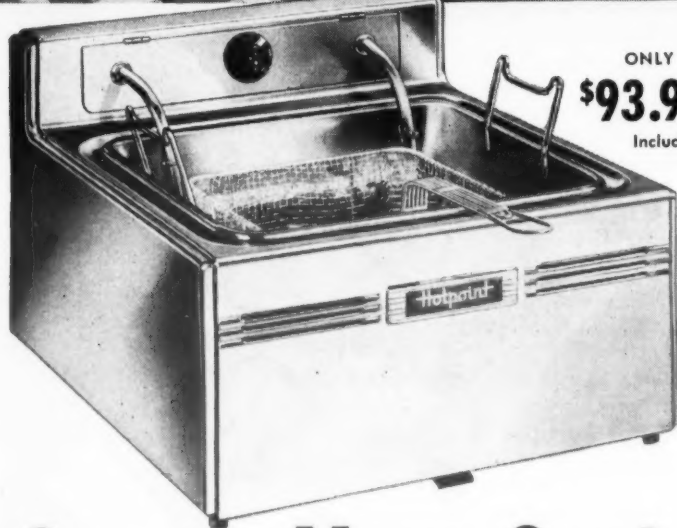
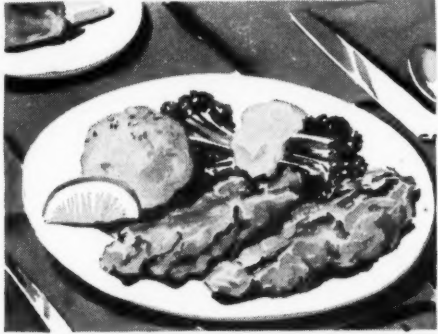
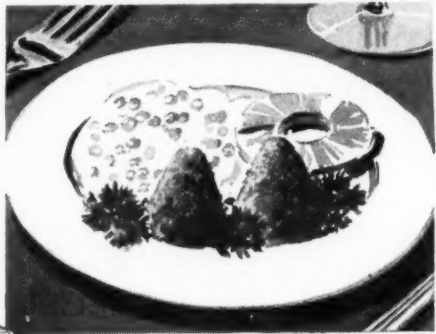
ABERDEEN, S. Dak.—The Farm Electric store at Aberdeen has been re-opened for business by Al Baumgarten of Rapid City, and Bernard Eccarius of Sturgis, for the sale of electrical appliances and other merchandise.

## Everybody's Pointing To Hotpoint

Browns 94 lbs. of French Fries per Hour. Here's real production capacity—enough to supply a busy lunch-counter at peak hours. Twin baskets available for frying smaller quantities of separate foods at same time.

109 Croquettes in 60 minutes. Croquettes like all fried foods taste better because Hotpoint's hydraulic thermostat holds fat temperature within proper range. A protective crust forms, sealing in natural flavors.

50 lbs. of White Fish per Hour. You can fry large quantities of fish, onions, potatoes—all in rapid order. Foods are cooked "just right." And each tastes of only its natural flavor. There is no transfer of tastes or odors.



ONLY  
**\$93.95** F. O. B. Chicago  
Including Federal Tax

## Hotpoint's New Custom-Matched FRY KETTLE...

## Serves More Customers Per Hour!

SERVING better food at greater speed benefits your commercial customers in two ways: 1. It insures satisfaction, builds good-will. 2. It speeds their turn-over, creates more meal checks per hour. That's what Hotpoint offers in its amazing new Electric Fry Kettle. Designed exclusively for deep-fat frying, it guarantees operators far greater speed and efficiency, as well as foods unequalled for their taste, appearance and digestibility. With the new high-speed immersion-type Calrod\* heating units, fat

temperatures can be raised to 350° in the record-breaking time of just 8 minutes. That's almost twice as fast as pre-war models! Production capacity is up 72% — with only 15 lbs. fat requirement. Properly used, a complete fat change is never required. Saves 25% to 60% in fat consumption alone. Fast, easy-to-clean, safe, the Hotpoint Fry Kettle is winning praise from progressive operators everywhere. See it soon or write for literature. Hotpoint Inc., 5632 West Taylor St., Chicago 44, Ill. \*Reg. U. S. Pat. Off.

Hotpoint's new Counter Kitchen may include two, three, four or all five appliances (only 7 1/2 feet in length). Duplicate appliances may also be included in the bank.



Custom-Matched Beauty By

**Hotpoint**  
HOTPOINT INC. A General Electric Affiliate

Oldest and Largest Manufacturer of Commercial Electric Cooking Equipment

## Most Modern—Most Efficient Most Economical To Use

## The "NAT" Suspended GAS UNIT HEATERS

85,000-125,000 and 165,000 BTU Capacity Available for Natural, Butane or Propane Gases. Delivery within 3 or 4 days.

Some exclusive territories still available.

• • •

We also manufacture a combination heating and cooling unit, gas fired furnace and the NAT "Self-Contained" Air conditioning unit.



Union Made

**THE NAT CORPORATION**  
2710 McGee Trafficway Kansas City 8, Mo.



## How Mobile Telephone Speeds Serviceman To Job Is Explained at RSES Convention

By George M. Hanning

CLEVELAND—Mobile telephone service, that is, having a telephone right in the service truck, can save the refrigeration serviceman both time and money, L. W. Golling, commercial service manager of the Bell Telephone Co. in Cleveland told members of the Refrigeration Service Engineers Society during their annual convention here.

Golling estimated that if a mobile telephone saved the service engineer 15 minutes a day in time that he might have wasted on a futile call or in not reaching a competitive job promptly, it would pay for itself.

He referred to an article published in AIR CONDITIONING & REFRIGERATION NEWS some months ago which described a mobile telephone used by a Milwaukee service firm. He noted that in the NEWS article, the owner brought out that the servicemen of his firm average 10 calls in a nine-hour day. This information, relayed to another metropolitan service firm, was described as impossible.

"Yet, Golling stated, 'it has been done and was accomplished by the use of mobile telephone.'"

Golling described the mobile telephone service for the engineers and Robert Wilcoxon, Bell service engineer, demonstrated a mobile unit wheeled onto the convention stage. Wilcoxon placed calls to an airport weather station, to an automobile equipped with a mobile telephone, and to the home, about 20 miles away, of a member of the audience.

Wilcoxon said, that through normal long distance channels, the mobile telephone can be connected with any other telephone in the world.

Golling pointed out in his talk that the mobile telephone operates on a frequency modulation principle that eliminates the interference of buildings, bridges, and trolley wires. "The user of mobile telephone service," he said, "can look forward to transmission quite comparable to that now being experienced in the ordinary local telephone call."

"The range of an urban mobile unit for effective telephone service," he declared, "is a 25 to 30 mile radius from the land based transmitter."

"A network of duplicate channels is being put into effect by the Bell

System that will provide service on your urban mobile unit in the area of practically every large city.

"Under this development, it will become next to impossible for the mobile unit to ever be out of call range."

Golling indicated that a highway mobile telephone service is being developed to cover the principal highways and water ways in the United States, so that eventually a mobile telephone equipped automobile can be contacted anywhere in this country.

He explained that the equipment installed in the truck consists of a compact transmitter, receiver, selective signalling unit, hand telephone, and an antenna to be mounted on the roof of the vehicle.

The signalling unit, he said, has both an audible and visual signal. Like an ordinary telephone, a bell rings, but for only five seconds. Then a red light turns on and remains on until the incoming call is answered.

So, if the serviceman is not in the car at the time of the call, he will find the light lit on his return. Then he may ask the operator to complete the call back to the party that originated it.

The hand telephone is placed under the car's instrument panel. A button is pushed when the caller desires to speak and it is released in order to hear the other party. The only other control is a switch to turn the power off and on. Power is supplied by the batteries of the car.

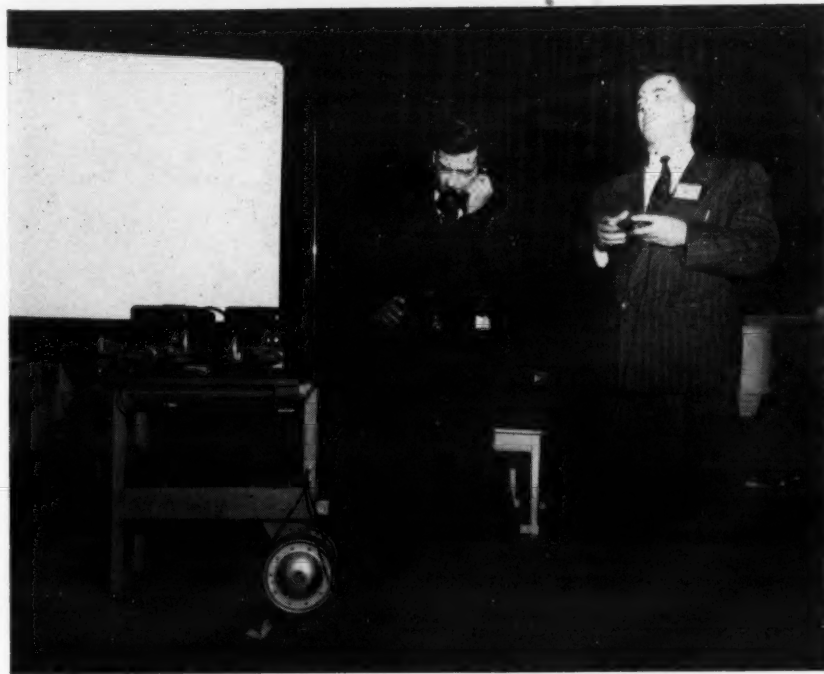
When the mobile telephone user wishes to place a call, he lifts the hand telephone and presses the "talk" button. This causes a light to turn on in front of the telephone operator. He gives his own number and the number he desires. The call is completed as with any other telephone.

Pointing out the need for mobile telephone in refrigeration service, Golling stated, "You can attain speed

of service and customer satisfaction only if you have the proper tools with which to do so. Mobile telephone service is a tool in your industry."

Describing application of mobile telephone to refrigeration service, he said, "If a serviceman that you have just dispatched on a routine job can be stopped enroute and rerouted to another more important job, you have saved time and perhaps truck miles."

## Calling Home Via Mobile Communication



As part of the demonstration of a mobile telephone unit to show how it might aid servicemen, Clarence Longbrake, Sr. (left), calls his home in Elyria, Ohio directly from the stage of the hotel. Standing at right is R. C. Wilcoxon of Ohio Bell Telephone who helped stage the demonstration.

## Dealers Investing More Capital In Inventories, Banker Survey Claims

NEW YORK CITY—Although the flow of goods from manufacturer to dealer is at present considerably more normal, retailers are investing more of their working capital in inventories than they were three months ago.

This opinion was expressed by two-thirds of the 228 leading bankers who participated in a recent survey by the American Bankers Association.

General feeling was that the inventory picture had improved. As for whose inventories were overstocked, however, opinion differed. Approximately 12% felt manufacturers' stocks-on-hand were too high, 20% thought it was the wholesalers, and 33% said dealers were overstocked. "Seasonal requirements and higher prices" were blamed for current "excessive" retail inventories.

The present inflationary trend affecting dollar values is creating the necessity for credit," the survey pointed out, "in order to carry increased dollar volume required by a normal volume of sales." About two out of three financiers predicted that bank loans will continue to rise during the first six months of 1948.

"More credit will be needed, providing the unit volume of business continues at the present level," declared Lester E. Shippee, chairman of the Associations credit policy committee. [Preliminary figures for the four-month period from June 30 to Oct. 29, 1947 showed that the boost in bank loans was almost 9%.]

## An Outstanding Engineering Achievement!

### A 3½ CU. FT. REFRIGERATOR COMPARABLE IN CAPACITY TO A 6 FT. REFRIGERATOR

#### AMAZING STORAGE SPACE IN

## Freeze-O-Matic

Junior

#### "AMERICA'S BIGGEST LITTLE REFRIGERATOR"

WITH

A READY-MADE PROSPECT LIST  
FOR YOU . . .

. . . BECAUSE your prospect list covers small, modern apartments, kitchenettes, bungalows, doctors' and dentists' offices, counter drug stores, laboratories . . . and all areas where space is limited. Here at last is that extra refrigerator your prospects want and need . . . that extra refrigerator for the basement, porch, summer cottage, or home bar.

. . . AND HERE IS AN EXCLUSIVE FEATURE THAT ONLY FREEZE-O-MATIC CAN OFFER . . . the new overlapping working table-top which conforms to the kitchen unit, prevents dirt, grease, crumbs or water from seeping into the refrigerator. Yes; a table-top that women appreciate and a top selling feature for you.

#### \*SPECIFICATIONS

##### INSULATION

Compressed Fibre-glass hermetically sealed, giving maximum protection in warmest temperatures.

##### CABINET

All steel, heavy gauge, reinforced for long life.

##### FINISHED PROCESS

Bonderized—plus three coats of high baked synthetic Dupont enamel, with porcelain finish.

##### HARDWARE

Chrome push-button lock, plus heavy duty hardware easily replaced.

##### UNIT

Tecumseh long life, extra capacity, noiseless 1/8 H. P. unit with internal spring mountings. Equipped with automatic safety disc and relay.

##### CONTROL

Ranco automatic selected temperature with internal light.

##### DIMENSIONS

Height—36", Width—24", Depth—21½", Net Weight—150 lbs.

\*Engineering the finest in refrigeration for over twenty years. Freeze-O-Matic reserves the right to make changes in all models without notice.



ALSO  
AVAILABLE  
WITH  
FORMICA  
TABLE-TOP

#### HERE'S WHAT CAN BE STORED IN THIS 3½ CU. FT. REFRIGERATOR

2 quarts of milk	1 jar syrup	1 bottle chili sauce
1 pint cream	4 cans beer	3 boxes cheese
2 large sodas	package of tomatoes	2 dozen eggs
2 packages frozen food	1 melon	7 lb. roast beef
1 lb. butter	jar of pickles	7 lb. chicken
2 lbs. lard	4 cans evaporated milk	

Write for Full Details on Territories Still Open

## ACME-NATIONAL Refrigeration Co., Inc.

634 DEAN ST., BROOKLYN, N. Y.

## PLAYSAFE

USE  
CHICAGO SEALS  
and  
VALVE PLATES



Only Chicago  
valve plates  
have replace-  
able seats.

PERFECT  
SEALS



Specify  
DAVISON PA 100  
refrigeration grade  
SILICA GEL

in factory-charged  
dryers bearing  
this label or in bulk for refilling  
PA 100 is your guarantee of all-  
around, superior performance  
SEE YOUR JOBBER





Close to being a "revolutionary" new development is this "packaged highside and lowside" pullout assembly in Fleetwood-Airflow's double-duty display case. The entire assembly in this patented development is replaceable, says Fleetwood President Louis L. Popky (right).



(Above) Miss Peerless (Betty Thomas) was again on hand to greet visitors, assisted by Sally Towsey. In background are the new Peerless "Cascade" coolers in which radiant cooling and convection cooling are combined and the ornamental casing of the motor driven unit is utilized as cooling surface. Fins are attached to the rear of the front panel by means of the copper tubing carrying refrigerant. Warm air from the space being cooled is drawn in at the top, cascaded over coils, and discharged downwardly from the face of the unit.



General Electric's "surprise" at the Show was the introduction of a wide line of packaged commercial refrigeration items. Among the items partially visible in the picture are G-E's new 18-cu. ft. frozen food display case, 16-cu. ft. reach-in refrigerator, 26-cu. ft. frozen food storage cabinet, milk cooler that will hold four 10-gal. cans and (in the foreground) an 8-compartment, four-lid beverage cooler that will hold 31 cases of 12-oz. bottles. Man in the picture who looks like he is hiding from the camera is J. H. La Haie of Ace Refrigeration Service, Milwaukee, who is really just bending over for a closer look.



(Left) Long lines of visitors sampled the ice cream dispensed from the new Frigid-Freeze "ice cream center" introduced by Refrigeration Corp. of America. This is a self-contained refrigerated fixture designed to stimulate the merchandising of ice cream in all types of retail establishments.



Monica Lewis, Decca recording artist, thinks Tecumseh Products Co. has "got something" in the transparent dome display of one of its 1948 line of hermetic condensing units, she tells Larry Larsen, assistant sales manager.



## There's a Rainbow 'round Your Shoulder

UsAIRco Air-gineers are a unique group in the business of heating, ventilating and cooling. They are franchised dealers who have much more to offer than all their competitors. They are uniquely positioned to do a better business at a better profit.

Not only do they have a complete line of pre-engineered packaged units . . . in a wide variety of capacities . . . they have a type of system to offer at 3 budget levels. They are able to offer comfort cooling that will make a profit for its owner regardless of the size of his business.

And above all this they have a rainbow 'round their shoulders in usAIRco cooperative engineering counsel that assures properly engineered installations.

But . . . if you want the whole story of what it means to be an Air-gineer . . . of the preferred position a usAIRco Air-gineer occupies . . . of the extra profits he makes . . . mail the coupon.

UNITED STATES AIR CONDITIONING CORPORATION  
Minneapolis 14, Minnesota

\*Trade Mark registered.

UNITED STATES AIR CONDITIONING CORPORATION  
3346 Como Ave. S.E., Minneapolis 14, Minnesota

Please send me details about Air-gineering.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

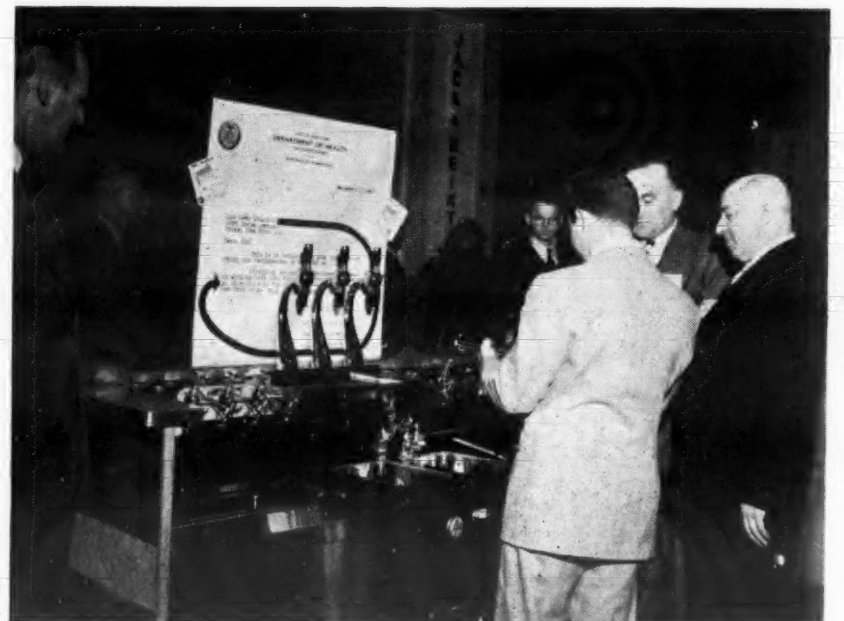
CITY \_\_\_\_\_ STATE \_\_\_\_\_

we're  
telling all  
your  
customers

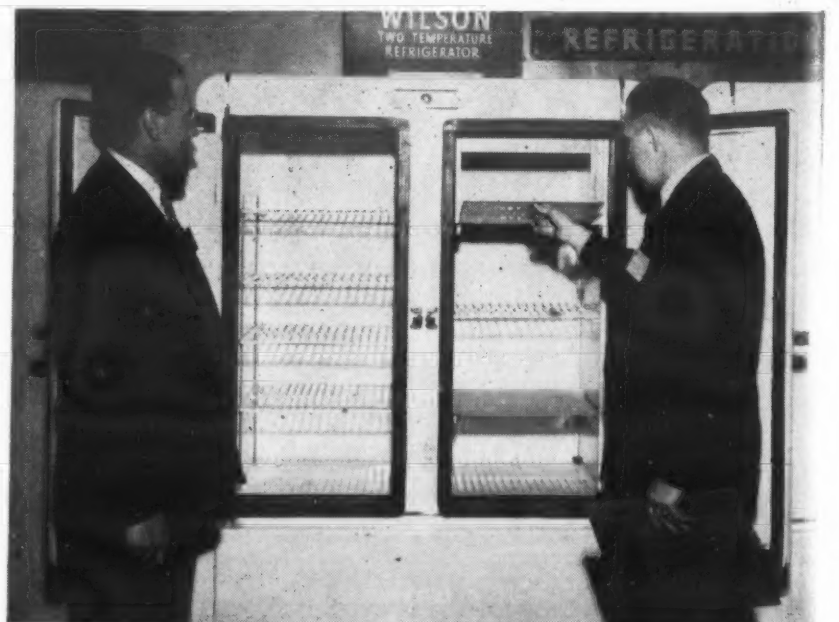
usAIRco

Air-gineering

3 COMFORT  
COOLING SYSTEMS  
AT 3  
BUDGET LEVELS



The blown-up letter propped atop Ace Cabinet Corp.'s new model A63B 6-ft. soda fountain draws attention to the fact that this unit is said to be the first soda fountain in the country to be approved by a municipal department of health. The City of New York health department gave the unit its approval. E. G. Sears, Ace manager (left), looks on as Edward Stern, Ace production manager, explains some features to H. and D. Friedman, both of Modern Refrigeration Co., Montreal.

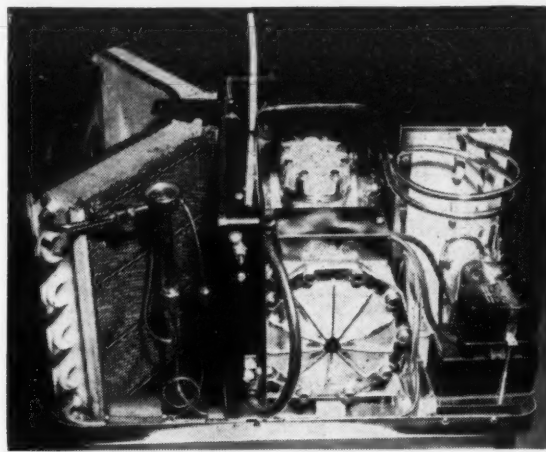


Edward Milner of The Edward Milner Co. of Toronto inspects the freezer compartment in the low temperature section of the new Wilson Refrigeration, Inc. 23.14-cu. ft. two-temperature reach-in refrigerator, as M. W. McKenzie of the Wilson firm looks on. This model uses a single condensing unit.





The new soft-drink dispenser which is designed as a four-way unit, dispenses two different carbonated beverages plus soda water at high and low pressures. Here it is demonstrated for William L. Coffey by James L. Hudson, head of Hudson Products Co. which introduced the device.



Inner workings of the new Fedders-Quigan 1/2-hp. room air conditioner shown at the All-Industry Exposition. Features of the unit (which is rated at 5,500 B.t.u. per hour) are the V-type evaporator and filter arrangement, and heavy-duty 2-cylinder 1/2-hp. compressor.



Manufacturer's Representative Robert R. Slater of Northwest Sales & Engineering, Seattle, Wash., and Byron Halstead of Halstead & Mitchell, with the new H & M water cooler which, the manufacturer says, can reduce 180 gals. of water per hour from 80 to 40° F.

## ✓ CHECK WITH Ranco FIRST

Specialists in Refrigeration	Less Stock to Carry
More Ranco Controls in Use	Greater Customer Satisfaction
Dependability	✓ More Profit For You



### You Can Specialize In Profits

What makes the refrigeration service man's business profitable? Fewer call-backs, satisfied customers and easy-to-work-with refrigeration controls. You'll find that Ranco Controls will meet these requirements . . . and provide additional advantages that add up to greater profits for you. Better check now with your Ranco wholesaler for complete information of profit-making Ranco Controls.

Ranco O-1401 and O-1402 pressure controls are for general applications requiring differentials of 8 lbs. or more. Single pole, snap-acting switch; Graduated visible scales calibrated for range and differential settings; Range screw changes out-out and out-in simultaneously; differential screw changes out-out only.

**Ranco Inc.**  
COLUMBUS 1, OHIO



World's Largest Manufacturers of REFRIGERATION CONTROLS



Robert S. Pollock (left) of Johns Hopkins university, gets the story on the new Airserco Start-O-Matic hermetic unit analyzer from Emmet Williams, Airserco president.



Bernard Packtor (left), representative for Tenney Engineering, Inc., shows his firm's new automatic defrostulator to Lars Hanson, director of developments at Carrier Corp. The unit, designed for low temperature applications, is said to be a simplified method of quickly defrosting low temperature evaporators without excessive temperature rise in the refrigerator.

## Facts

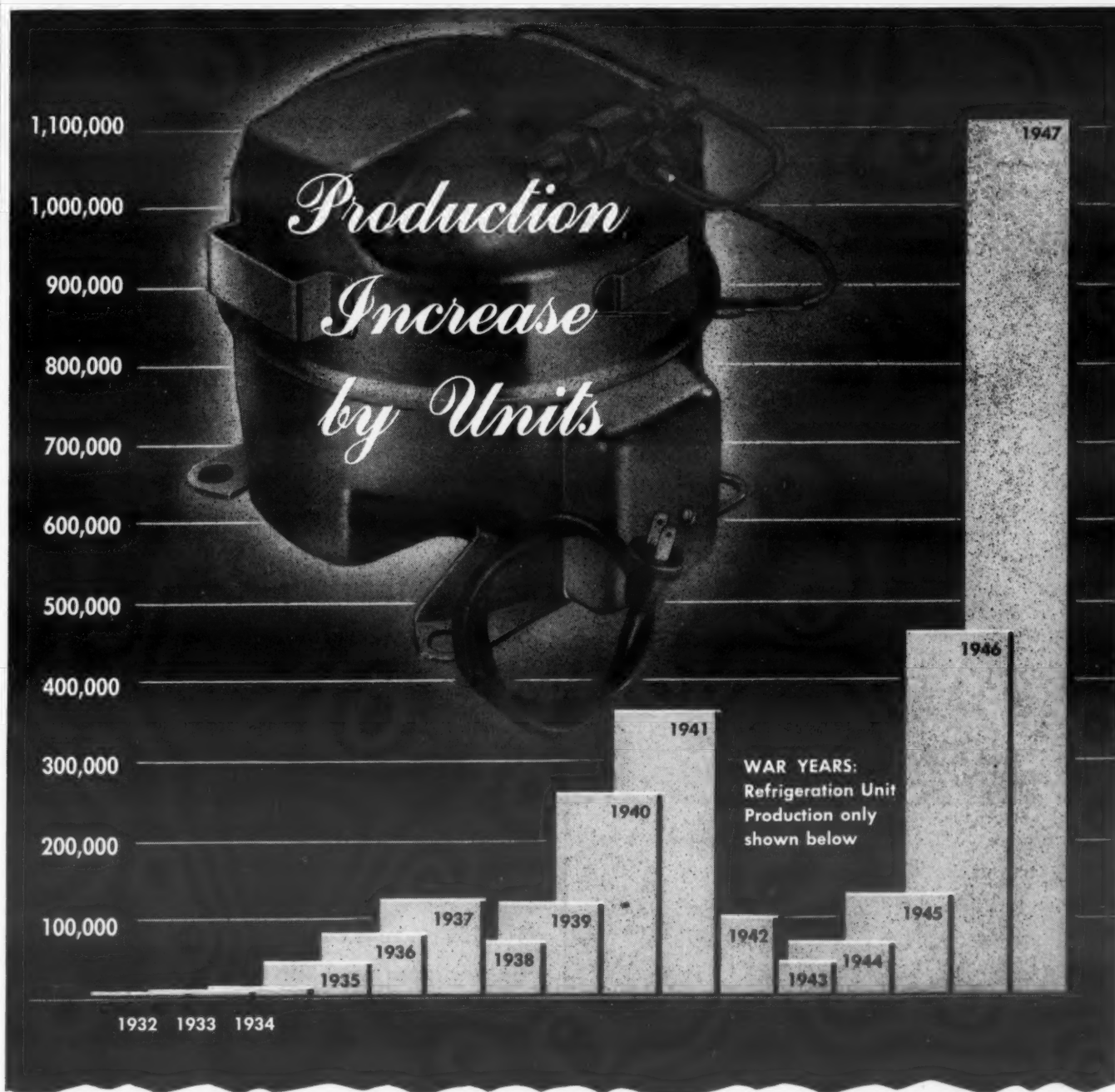
### ABOUT THE ROOM AIR-CONDITIONER BUSINESS

Undersized room air conditioners, that fail to satisfy, create more complaints than profits. Units with plenty of capacity build a following of enthusiastic, satisfied users who place repeat orders and urge their friends to buy.

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High industrial productivity is the basis of America's economic strength. Here, in these United States, more goods are produced faster, better and at lower cost than in any other country in the world. Here, free people work fewer hours, get higher wages, enjoy more leisure and luxuries than the people of any other country in the world. Why? Because high productivity . . . largely responsible for these conditions . . . is a natural reaction to the opportunities and incentives provided by a free competitive system of business.

With the exception of recent years devoted to the production of war materials, Tecumseh Products Company has steadily increased its output of compressors and condensing units for the refrigeration industry. Total yearly unit production has jumped from 1500 in 1932 to well over 1,100,000 units of all types in 1947.



**TECUMSEH PRODUCTS COMPANY**  
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## Do You Have 'One Foot In the Door'?

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EQUIPMENT

A good Refrigeration Man puts his best, sincerest effort into every job. Then, when he's finished, he goes on his way—entrusting his reputation to the performance of the Equipment.

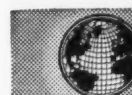
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REFRIGERATION News**

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VOLUME 53, No. 6, SERIAL NO. 986, FEBRUARY 9, 1948

## Without Adequate Statistics We All Work In the Dark

OPPOSITION on the part of many segments of the commercial refrigeration and air conditioning industry to the establishment of an unbiased, neutral, central source of industry statistics seems to persist. Many of the industry's top executives wonder why.

Lacking authoritative, complete production figures and sales statistics for current years and quarter-years, all the sales managers who operate in our industry are working "in the dark." They must depend upon hunches, upon unreliable barroom revelations, and upon sneaking suspicions to predicate their estimates of the business-they're-getting as compared to the business-to-be-had.

The sales managers' plight is sad enough. He doesn't know how he's doing *this year*. But consider the case of the poor market planner, who deals in futures. The latter doesn't know how many units of this-or-that item were sold last year or in previous years; and yet he is ordered to figure out the market potential for air conditioners of all sizes, water coolers, home freezers, walk-in refrigerators, milk coolers, reach-in boxes, display cases, medical serum protectors, machine-tool cold-holders, etc. for *future years*.

When he looks over the vast array of commercial refrigeration and air conditioning applications—which are so multifarious, complex, and interwoven that they'd puzzle a designer of oriental rugs—he gives up the ghost before he even starts to try to attempt to assay to begin to understand the fundamentals of his problem.

And if the multiplicity of applications in this field of engineering endeavor isn't sufficiently bewildering to drive him crazy, you can bank upon it that he'll lose his mind altogether when he is told at least five separate organizations collect figures for the sole inspection and introspection of their own members in the commercial refrigeration and air conditioning business.

Some firms belong to two or more of these competing associations. These hydra-headed firms report their sales statistics to each group to which they belong. This makes for complicated overlapping and duplication. So it happens that the neutral "catalytic agent" who tries to amalgamate and "weigh" all these combined figures is in a helluva spot. He'd do better at figuring the odds on a four-horse parlay.

Here's our suggestion as to one way out of this impossibly entangled situation:

Let's start all over.

Let bygones prejudices about who's big and who's small, about who ought to get the business and who is getting it, be abandoned in the interest of industry integrity. Let's forget—in this one instance—that we have competitors, both present and potential. Let's remember that our industry is fated by the Gods to become a Big Industry—and that there will be more than plenty for all of us—if we go after our sales potential intelligently. Let's all get together to promote our own selfish aspirations in a Big Way.

By submitting monthly, quarterly, and annual production and sales figures to a disinterested accountant—who will amalgamate these figures into immensely-useful-to-all-of-us totals—every producer in the industry can come a lot closer to his goal of trying to find out "where are we, and where are we going."

And then we'll all be able to persuade our Boards of Directors that the commercial refrigeration and air conditioning industry holds forth a promise of future large dividends, and that current investments in research and sales promotion will pay off eventually.

Inferiority-complexed reluctance on the part of any manufacturer to contribute information to such a "pool" of needed industry statistics may keep the reluctant virgin (air conditioning and commercial refrigeration) in the "small potatoes" class. That's for sure.

It's time we all grew up. If we're ever going to make air conditioning and commercial refrigeration the mighty industry it deserves to be—and will become, if we'll let it—we'll have to work together for the good of the entire industry.

What are we waiting for? Why not get together now?

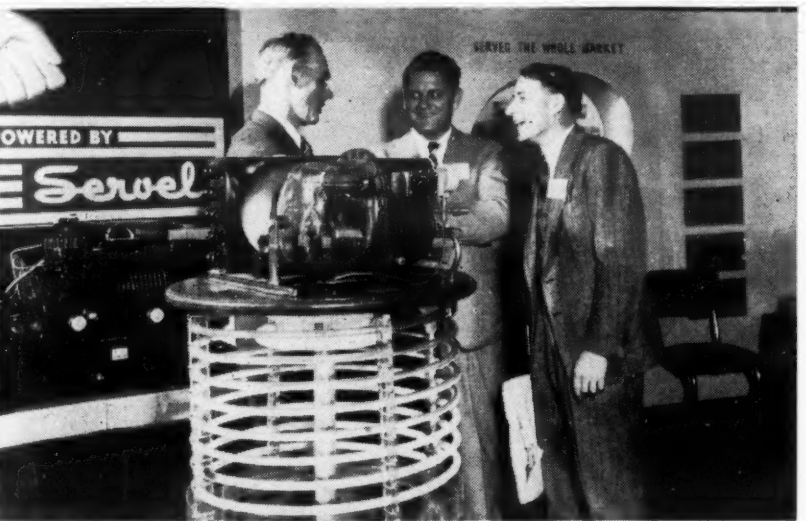




This all stainless-steel beverage cooler with forced-draft refrigeration, adjustable dividers and utility shelf, automatic light switches in both door jambs, and recessed toe arrangement, gets the close scrutiny of Don E. Stevens of St. Paul and Argos Mattison, Argos Refrigeration, Alexandria, Minn. Cooler is made by Victory Metal Products.



Westinghouse introduced its wide new line of water coolers at the show, and it immediately attracted "world wide" interest, as evidenced by the earnest discussion Eric C. Ebeling of F. C. Lovelock Pty., Ltd., Sydney, Australia (back to camera), is having with Westinghouse representatives J. B. Baughman, F. E. Moquin, and E. H. Wilkins, Jr.



Just how a refrigeration system functions with the 1948 Servel "Supermetric" compressors was shown in this display setup built with circular coil glass evaporator. In the picture are W. F. Cissell of Servel, William E. Linde, Guiberson Corp., Dallas; and William E. Anglin, Dr. Pepper Co., Dallas.

## Servicemen Fighting Lincoln, Neb. Code On Electrical Work

LINCOLN, Neb.—Members of the Lincoln Refrigeration Service Association have expressed opposition to the city electrical code which the Lincoln city council is holding in abeyance.

The refrigeration men stated that opposition is on the grounds that the proposed code does not allow refrigeration servicemen to service electrical motors on refrigeration equipment, unless they hold a master electrician's license, according to Fred Schmidt, spokesman for the association.

## Finley & Gibbs Form New Mfrs.' Agent Setup

ANOKA, Minn.—Elmer J. Finley and Fred M. Gibbs have formed a company to be known as Finley & Gibbs, manufacturers' agents.

Gibbs has been with the United Refrigerator Mfg. Co., Inc., as purchasing agent.

Finley has been with United since 1941, where he was purchasing agent during the war years, and where he also acted as assistant to the sales manager.

Office of the new company is at 2651 University Ave., St. Paul. They will act as sales and procurement representatives of the Anoka Mfg. Co., of Anoka, Minn., and will handle lines allied to the commercial refrigeration field.

## BTC FOOD FREEZERS

Win Consumer Confidence and SALES



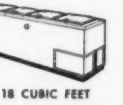
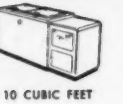
Consumer confidence and sales can be obtained and held only with properly engineered low temperature food freezers. BTC Food Freezers are soundly engineered to deliver the essential performances of rapid freezing and constant temperature storage.

Note these basic construction and refrigeration features built into BTC Food Freezers:

- Separate Sharp Freeze Section
- Adequate Storage Compartments
- Solidly-built 16-ga. Steel Cabinet
- Vapor-Sealed Insulation
- Non-Heat Conducting Lids
- Extra Compressor Capacity

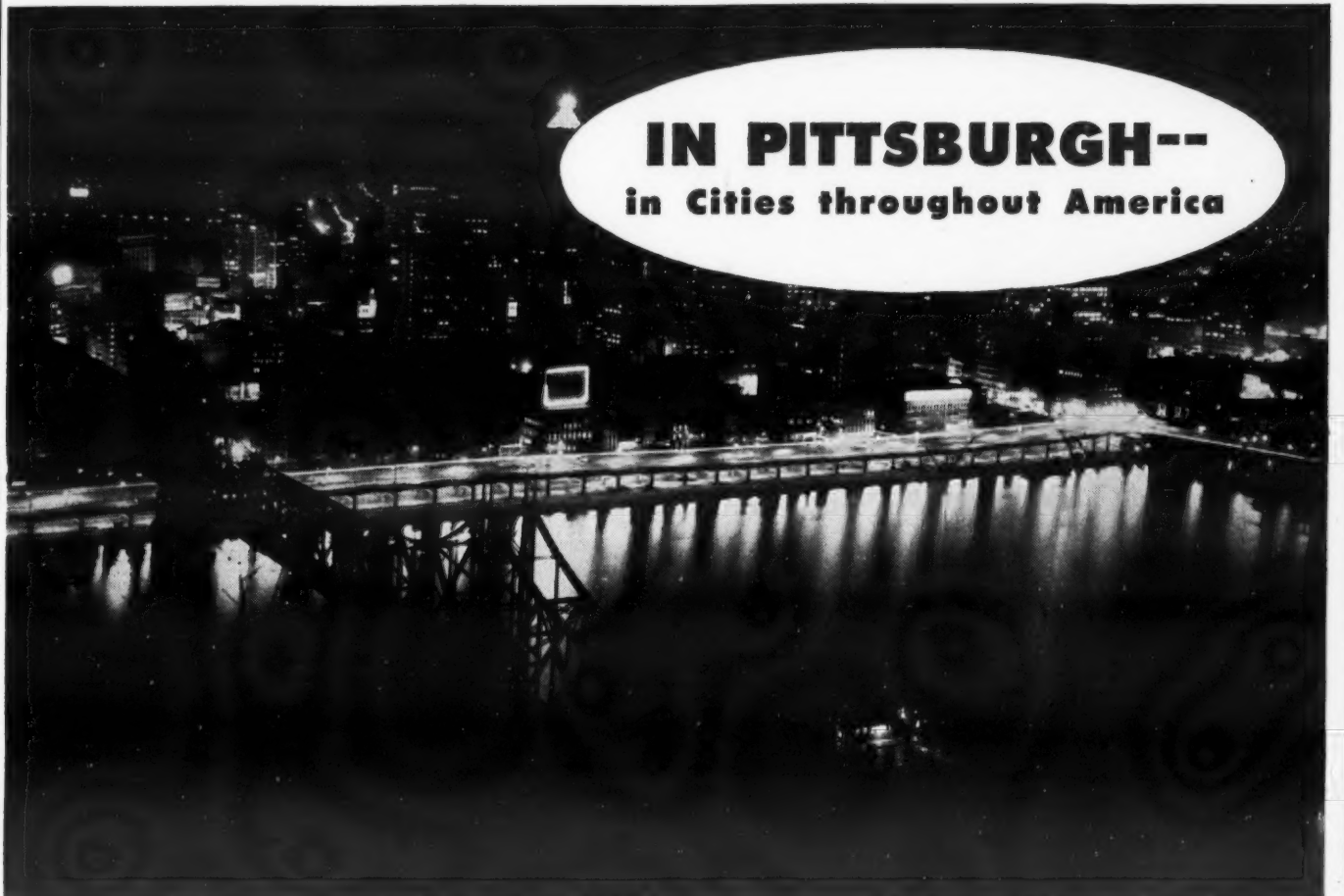
Customers will not long be satisfied with inadequate "cold storage boxes." The BTC Food Freezer line, in sizes 10, 12½, 18, and 23 cubic feet, offers true home and farm food freezing performance on which permanent sales relationships can be built. A limited number of dealer and distributor franchises are available. Write for full information.

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CRANDAL-STONE DIVISION --- BINGHAMTON, N. Y.



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## Wagner Quality Motors help control the "weather"

Countless Wagner Motors are on the job, day and night—summer and winter—to help people work and play in year 'round comfort. The rapidly growing business of controlling the "weather" through air-conditioning, heating, and ventilating has created a demand for motors that provide quiet, troublefree, dependable power. Wagner Engineers have met this demand and Wagner Motors have played an important part in the development of this tremendous industry.

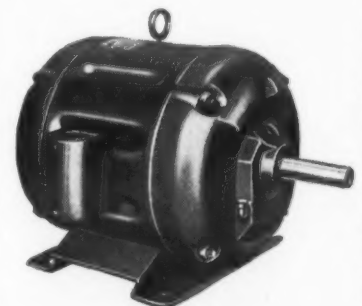
Wagner builds motors in types and sizes for a wide range of applications. Maximum service at low cost has made Wagner Quality Motors famous for over 50 years. Whatever your job, a Wagner Motor will handle it efficiently and economically. Quick, convenient, nationwide service facilities are available to users of Wagner Motors.

Ask any of our twenty-nine branch offices, located in principal cities and manned by versatile field engineers, for advice on any motor application.

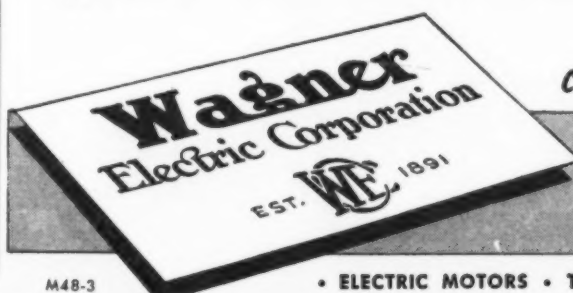
Write for Bulletin MU-185 for information on the complete line of Wagner Motors.

### Wagner Electric Corporation

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Regardless of what your motor requirements may be—large motors... small motors... Wagner makes them all. The motor illustrated is typical of the Wagner line of polyphase and single phase motors. Choose a Wagner motor for your next installation.



Consult Wagner Engineers on all Electric Motor Problems



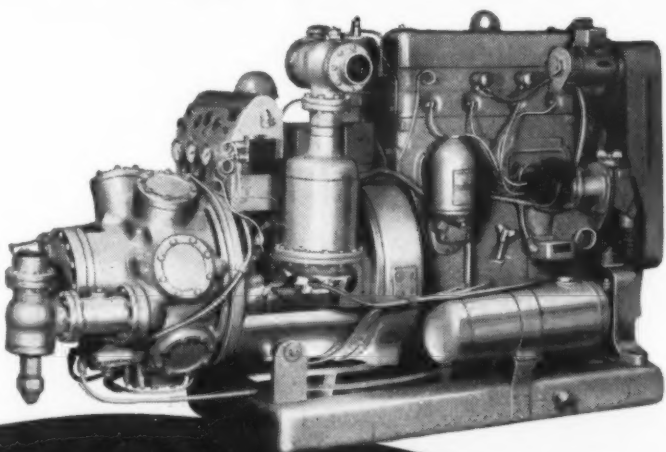
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Here is dependable, automatic air conditioning at the lowest possible cost! These units are powered by International engines and operate on fuels that are inexpensive and plentiful. Ideal for situations where power is inadequate. Write The Ready-Power Co.



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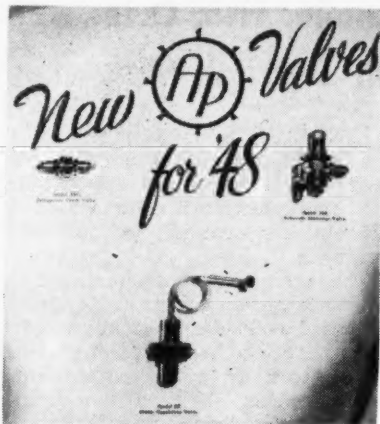
### STYLED FOR PERFORMANCE

Larkin refrigeration products, made by the originators of Cross Fin Coils, combine industrial beauty with flawless performance. Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Evaporative Condensers—Air Conditioning Units—Instantaneous Water Coolers—and other top-ranking factors in industrial and commercial refrigeration.



**LARKIN COILS** 519 MEMORIAL DRIVE • S.E. ATLANTA • GEORGIA

### New Refrigeration Products, Accessories Bow In at Show



New Automatic Products Co. refrigeration valves for 1948, as presented at the All-Industry Show, include the Model 234 refrigerant check valve (upper left), Model 304 automatic expansion valve (upper right), and Model 65 water regulating valve (bottom).

The check valve is installed in the outlet line of the lower temperature evaporator in a two-temperature system to prevent the flow of gas from high to low temperature evaporator during off-cycle. The valve can be installed in the suction line in any position.

Model 65 is a new small sized addition to the AP series of water regulating valves. Dirt and lime can't effect shut-off efficiency, because on every cycle, action of sliding seal wipes orifice and seal clean. Built-in modulating feature eliminates "water hammer."

Model 304 is a new 1-ton "Freon-12" expansion valve designed for beverage coolers, reach-ins, room coolers, etc., within a range of 15 in. vacuum to 35 lbs. pressure.



Highlight of Marlo Coil Co.'s exhibit was the new model LTV low temperature vapor defrosting unit. The unit has a separate sealed system carrying hot vapor to all portions of the evaporator coil evenly for fast, even defrosting. It is actuated by a rod heater. This model is intended for frozen food processing and storage and other low temperature jobs. In this picture V. E. Porta, Marlo factory superintendent, checks some data for B. Glasner, Commercial Engineering & Refrigeration Service, Chicago.



Imperial Brass' new Hi-Duty flaring tool is the center of attraction to John A. Grant, Imperial Canadian representative; A. W. Brown, Aircro Refrigeration Parts, Montreal; and Raymond Brault, Aircro.



L. C. Keeley, Airo Supply Co., Chicago (second from left), greets J. W. Thomas, Brunner Mfg. Co. sales manager, as E. L. Beaver, Mitchell Refrigeration Co., Detroit, looks on. Behind them is the new W-1000 Brunner condensing unit, equipped with the special compressor unloading feature.



*for*  
**FRESH MEAT**

WITH

**THERMOBANK**

by **KRAMER**

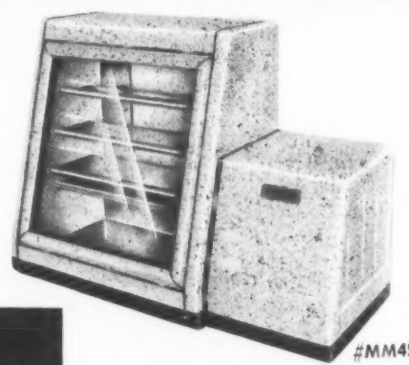
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Coils Frost-Free *Automatically*  
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*Self Contained*  
**DISPLAY CASE**

Ready for plug-in operation. Available in 4, 5, 6 ft. sizes. Unit housing is ideal for display shelves, cash register or scale stand.

We also Manufacture a Complete Line of Commercial Refrigeration Equipment.

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LET THIS DISPLAY



## Lower Prices on '48 Philco Models--

(Concluded from Page 1)

New York for \$299.50 as compared to \$319.50 for the comparable 7-cu. ft. Philco refrigerator last year.

The new price, Carmine said, is only 7% above 1940 levels.

Other examples of price reductions cited by Carmine were the model 782, priced at \$267 in New York as compared with \$289.50 for a comparable 7-cu. ft. refrigerator last year. In addition, it is claimed that this model has nearly three times the freezer space of former 7-cu. ft. models.

Model 780, priced at \$199.50, is said to require only the same floor space as was taken by the 6-cu. ft. model it displaces. Price of the 6-cu. ft. model last year, when production costs were far lower, was \$199.75.

Other refrigerators in the new line range in capacity from 7 cu. ft. to 11.2 cu. ft. The latter model, the Philco 1100, is the first 11-cu. ft. refrigerator ever made by the company and is designed for farm or big family homes.

Refrigerator models, capacities, and their New York prices are:

Model	Capacity In Cu. Ft.	Installed Price
780	7.0	\$199.50
781	7.7	237.00
782	7.7	267.00
883	8.0	299.50
885	8.0	349.50
887	8.6	399.50
1085	10.0	379.50
1087	10.7	449.50
1100	11.2	329.50

The models from 883 and higher, except the 1100, are advanced design units with freezer storage compartments extending across the top of the refrigerator. The lower numbered models are of the standard type with the freezer locker in the upper right hand corner of the unit.

The models 887 and 1087 are equipped with a new transparent plastic Conservador that fits inside the door opening and provides a little additional shelf space. These units also feature a Superfast ice tray shelf.

Shelving in these and in models 780, 781, 885, and 1085 extend horizontally across the entire width of the cabinet. Other models are equipped with divided shelves and center posts for complete shelf adjustability.

The Philco home freezer line is being offered in three sizes, 2½, 5, and 7½ cu. ft. The largest in the line, the AV-75, is also the only up-

right freezer made by the company. No retail price was announced on this model.

The AV-75 is said to hold more than 300 lbs. of frozen foods at below zero temperatures. It is comprised of three compartments, one above the other.

The top compartment provides sharp freezing at -15° F. and all three maintain sub zero temperatures for storage. Patented shelves slope to the rear and drop doors open to two positions—partially open and wide open. These features, Carmine said, are designed to reduce cold loss while making the packages completely accessible.

The other three new models are chest type units. The 5-cu. ft. units, the AH-51 and AH-50, will hold 200 lbs. of frozen foods. They are divided into three vertical compartments, with the center one designed for sharp freezing at -15° F. Both also have a "Guardian Bell" warning device.

The deluxe AH-51 has, in addition, a counterbalanced lid and a built-in thermometer and lock. The AH-51 is priced at \$249.50 and the AH-50 at \$229.50, both f.o.b. factory.

The AH-24, the 2½-cu. ft. model will hold 100 lbs. of frozen food and is priced at \$159.50. It has an automatic guardian bell and a factory set temperature control.

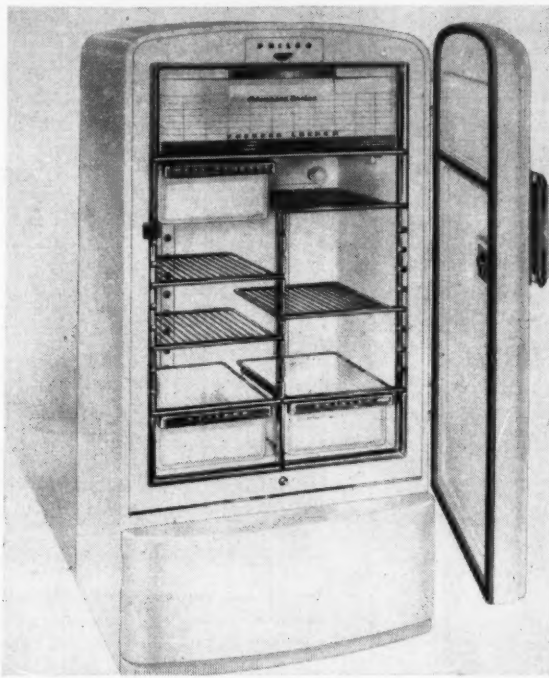
John M. Otter, Philco general sales manager, in introducing the new refrigerators and freezers, declared that there exists today a demand for at least 6,000,000 refrigerators.

"Philco plans to obtain its full share of this business, and assuming a free flow of raw materials, our refrigerator-freezer sales volume should reach \$100,000,000 in 1948, as compared with \$65,000,000 last year and \$17,000,000 in pre-war 1941."

Price reductions on Philco products, as announced here, were most noticeable on radios. A three way portable, Model 602, was priced at \$29.95, less batteries, as compared to the \$39.95 asked for the lowest priced portable in the 1947 Philco line.

The model 1282, which sold for \$179.95 in a mahogany cabinet last year is out this year in a walnut cabinet for \$169.95. The model 1286, a deluxe radio-phonograph combination with FM service and housed in a mahogany Georgian cabinet, is priced at \$299.50 as compared with \$329.50 for the model 1266, which it replaces.

## 8-Cu.Ft. Model Roomy, Yet Compact



Just announced for 1948 is this new 8-cu. ft. Philco refrigerator which takes up no more space than the 7-cu. ft. model. Shelves (every one adjustable) provide 15.6 sq. ft. of bottle and dish room. Other features: 30% more frozen food capacity, 24% more power from the hermetic unit.

## Nashville Sales of Freezers Rise, But Refrigerators Drop

NASHVILLE, Tenn.—Sales of electric ranges and home freezers continued to rise here during December while refrigerator and water heater sales dropped below the November total, the Nashville Electric Service has reported.

With 75 dealers reporting, range sales numbered 533 units in December, 32 more than in November. Home freezer sales increased from 19 to 29 units.

Refrigerator sales dropped from 506 units in November to 462 in December. Water heater sales slipped from 355 units in November to 314 in December.

## Howard Heads Dishwasher Sales for Kaiser Fleetwings

OAKLAND, Calif. — Alfred D. Howard, a veteran of nearly 20 years in the appliance business, has been appointed general sales manager supervising dishwasher sales, it is announced by Kaiser Fleetwings Sales Corp.

Howard's appointment followed a short tenure as assistant general sales manager, which post he accepted last spring after eight years with Servel, Inc., as assistant sales promotion manager. While with the latter firm, Howard served successively as branch manager, district manager, New York sales promotion representative, and assistant sales promotion manager.

Prior to 1932 he was a salesman for Kelvinator Corp.

## New G-E Credit Corp. Office Will Be Managed by Sherman

OKLAHOMA CITY, Okla.—General Electric Credit Corp. has opened a new office here as part of a national program of expanded local coverage to take care of the increase in installment sales paper from General Electric and Hotpoint appliance dealers.

H. S. Sherman has been appointed manager of the office, 105 N. Hudson St., it is announced by L. E. Scott, Southwestern District manager.

## Presteline Distributor Covers 20 Counties In Upper Ohio

CLEVELAND—Northern Ohio Appliances, Inc., Cleveland, has been appointed distributor for Presteline appliances for the upper 20 counties of Ohio including Cleveland, Akron, Canton, and Youngstown, reports C. J. "Cash" Lauffer, president.

Presteline appliance sales will be handled under the direction of Earl L. Bosley, sales manager, and four distributor salesmen.

## LET THIS DISPLAY REMIND YOU

... that THAWZONE and TRACE are two "musts" in protecting refrigeration systems and keeping them functioning perfectly with the minimum of attention.

THAWZONE, active, always circulating, destroys moisture chemically, economically, quickly and effectively, in new, reconditioned or old systems.

TRACE is the highly effective refrigerant leak detector with the vivid red color that quickly spots leaks in any refrigeration system... new, old or reconditioned.

You will see this attractive display on the counters of leading refrigeration equipment wholesalers throughout the country.

**HIGHSIDE CHEMICALS COMPANY**  
195 VERONA AVE.,  
NEWARK 4, N. J.



**SELL THE BEST**  
...the Best Buys!

**IN MODERN APPLIANCES**

It's a smart dealer who remembers the selling power of Fiberglas\*...and uses it!

**A GOOD FEATURE TO HAVE...A GOOD FEATURE TO SELL!**

OWENS-CORNING  
**FIBERGLAS**

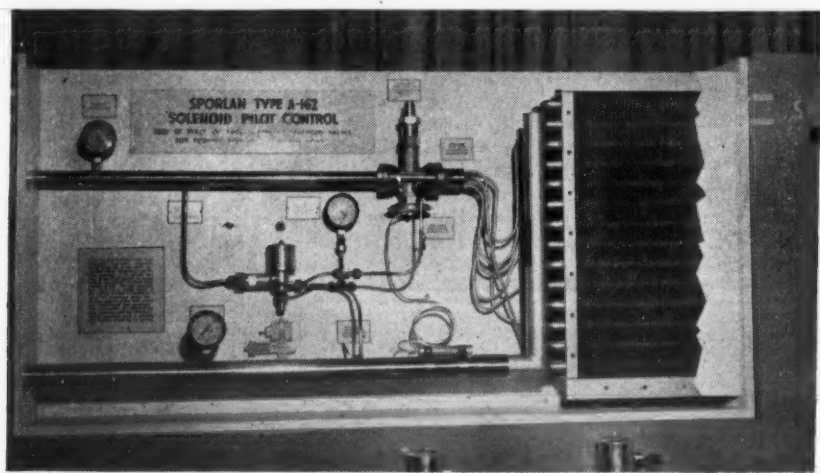
**THERMAL INSULATION**

\*Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

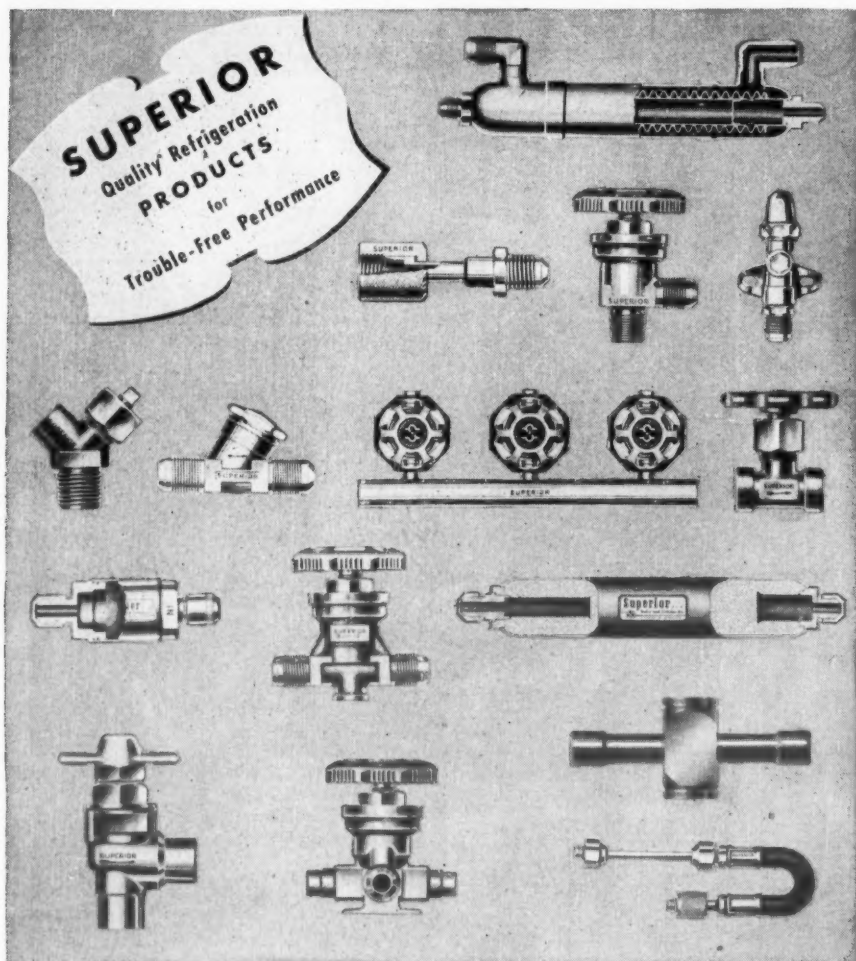




Crown Refrigerator featured a 4-ft. full-vision self-contained display case, being inspected here by Murray Munroe of Munroe Refrigeration, Fargo, N. D., and Tom Taaffe of Crown.



Demonstration board shows operation of the Sporlan Type A-162 solenoid pilot control, used in place of large capacity solenoid valves for positive shut-off of liquid lines.



### Designed and Engineered for Maximum Performance...

In all refrigeration and air-conditioning systems, the SUPERIOR line includes the famous Diaphragm Packless Line valves; globe, charging, purging or drain valves; hand expansion valves; pressure cup (wing cap) globe valves; packed line, angle, compressor and cylinder valves; check valves; liquid indicators and sight glasses; quick couplers; gauge manifolds; economizers (heat-exchangers) and manifolds; dehydrators and filters; rapid-chargers (refrigerant transfer systems); charging hose; and SAE flare fittings.

If you haven't a copy of SUPERIOR Catalog R-2, request one today

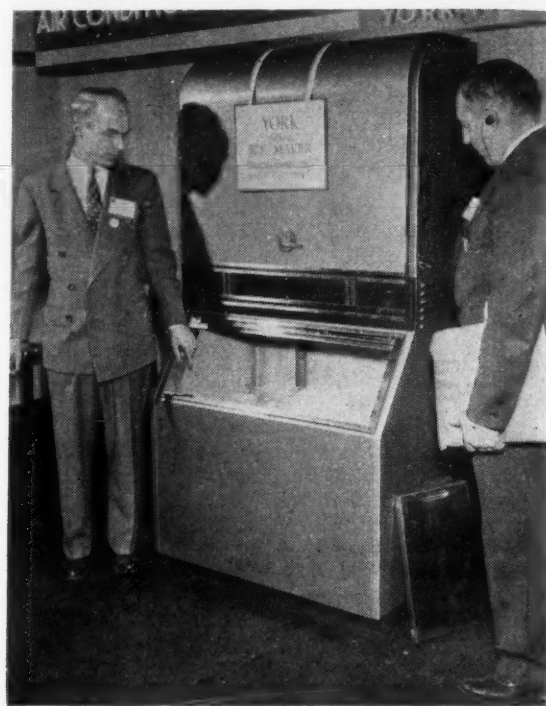
**Superior Valve and Fittings Co.**



1509 WEST LIBERTY AVE. PITTSBURGH 26, PENNA.  
OFFICES IN PRINCIPAL CITIES STOCKS: CHICAGO (6) - LOS ANGELES (15) - JOBBERS EVERYWHERE



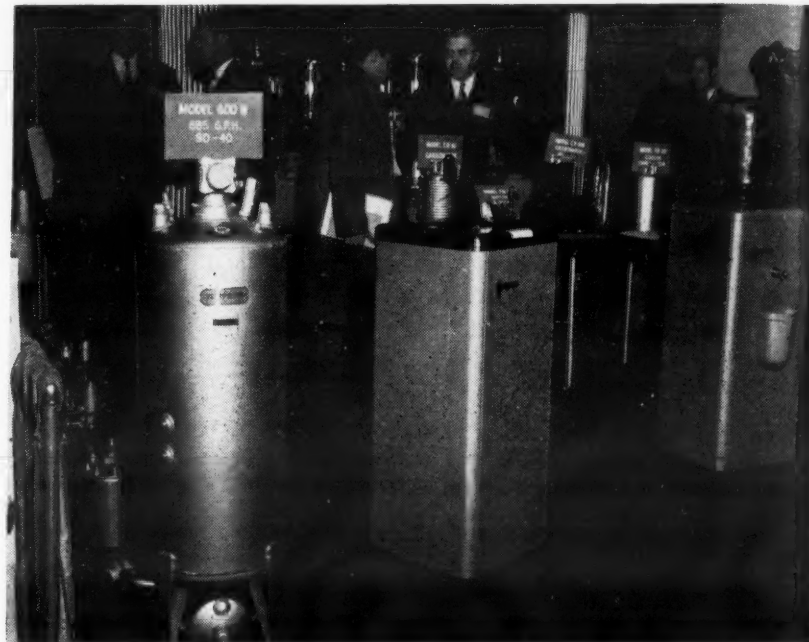
Trying out the new self-contained all dry soda dispenser made by Paley Mfg. Co. is Nat Baron of Baron's Refrigeration Service, Passaic, N. J. It is equipped with pump-type carbonator and 1/2-hp. Copeland condensing unit. Syrup is driven by pressure and is refrigerated before it enters the mixing faucet.



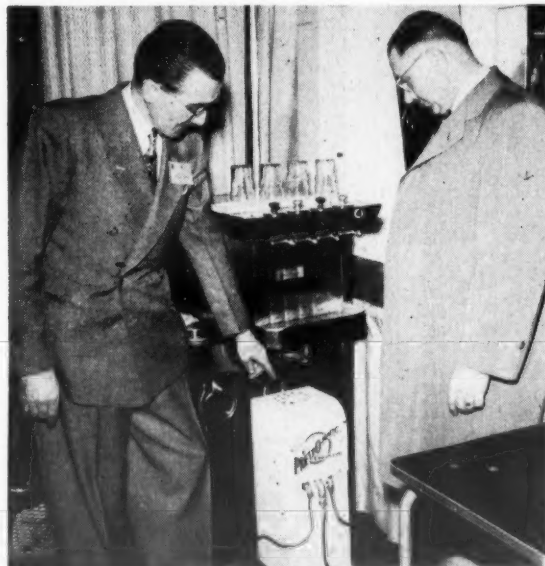
This new model York Corp. automatic ice maker will make 10 lbs. of ice cubes per minute. J. L. Currie of York (left) explains it to L. C. Pfeiffer, Kurtz Refrigeration, Pittsburgh.



A new Curtis condensing unit in the odd 1 1/2-hp. size interests Henry S. Miller of the Electric Refrigeration Service Co. of Avon, N. Y. as George C. Helde of the Curtis Co. gives out with some of the details about it.



Three new Temprite Products Corp. products in the foreground. Left is the industrial water cooler which will cool 685 gal. of water per hour from 80 to 40° F.; in the center is the new model PB 10 pressure cooler, and right is the model BC-3 bottle cooler. Not shown is the new carbonator package, consisting of carbonator, pump, and motor in one package—water and electrical connections being all that is necessary.



The new Prest-O-Matic motorless electric carbonator designed and manufactured by Bartelt Engineering Co. of Rockford, Ill. is demonstrated by Paul N. Seiler, Prest-O-Matic sales representative to Al Helmbold, Kingston, N. Y.



Louis M. Kann, Jr. of The Oreole Refrigeration Co. of Baltimore makes a close inspection of the new model U evaporative condenser introduced by the Baltimore Air Coil Co., as Ray R. Forseille, B.A.C. vice president, looks on.

## Quicfrez TRIZONE

**NORMAL TEMP.**  
40°

**FAST FREEZING**

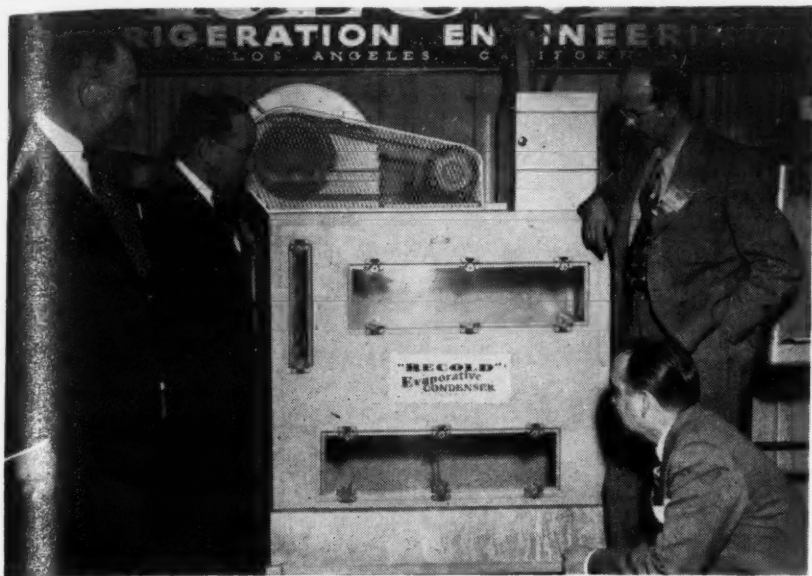
**MODEL - 1148**  
NET CAPACITY  
10.7 CU. FT.  
FROZEN MEAT  
250-300 LBS.  
48 1/2" W. X.  
28" D. X. 40 3/4" H.

RETAIL  
PRICE  
\$399.50

**FROZEN STORAGE**  
0°

**SANITARY REFRIGERATOR COMPANY • FOND DU LAC, WISCONSIN**  
ICE REFRIGERATORS FOR MORE THAN 40 YEARS





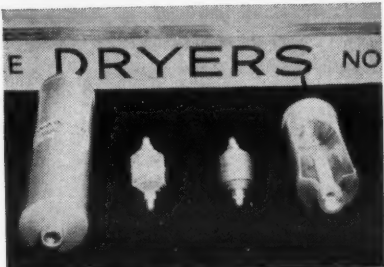
This new design in evaporative condensers in which no moisture laden air is in contact with the blower or blower housing will soon be put on the market by Refrigeration Engineering, Inc. Viewing it are (l. to r.) Albert Arras, New York; J. Pat Riley, Long Beach, Calif.; W. E. Wharton, Oakland, Calif.; and Sterling Smith, Washington, D. C.



Louis Weiss (left) of Ideal Cooler Co. points out features of the firm's 20-cu. ft. low-temperature cabinet to George Okum, Metz Fixtures, Cleveland. Also prominent in Ideal's booth was the 47-case bottle beverage cooler with the "spot cooling" feature.



H. C. Hickock, general sales manager, Baker Ice Machine Co., goes over some features of a new Baker unit with L. C. Pellegrini & A. T. Marlo, Marlo Coil Co.



Extreme limits of the Wabash line of driers introduced at the Show are shown above. Called the midgels and the giants, they are, from left to right: the 100-cu. in. steel drier, a 4-cu. in. steel drier (sectioned), a 4-cu. in. brass drier, and a 50-cu. in. steel drier (sectioned).

**DESIGNED FOR DURABILITY**

Order Now these popular items from our complete line of Test Proven Equipment. Models to fit any need. Built to give dependable economical performance—heavily insulated and sturdily constructed throughout.

For Further Information contact your local dealer.

**The LA CROSSE COOLER CO.**  
LA CROSSE WISCONSIN

**"ONE STOP SERVICE"**  
For Your  
**REFRIGERATION  
SUPPLIES and PARTS**  
also Complete Stocks of  
Pipe, Valves & Fittings

**HAJOCA CORPORATION**  
Philadelphia, Pa.  
Reading, Pa. Chattanooga, Tenn.



Larkin Coils introduced a broad new line of "Humi-temp" unit coolers, and also a new ceiling unit cooler only 6 in. deep and designed for easy servicing.

see your **"DETROIT"**  
**WHOLESALE**  
for  
Expansion Valves  
Solenoid Valves  
Controls

**"DETROIT"**

2810

**DETROIT LUBRICATOR COMPANY** General Offices: 5900 TRUMBULL AVENUE  
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary Corporation  
Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG.

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Fleet Valves and Oil Burner Accessories  
"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators  
EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey

*Selb leads the way  
See it today!*

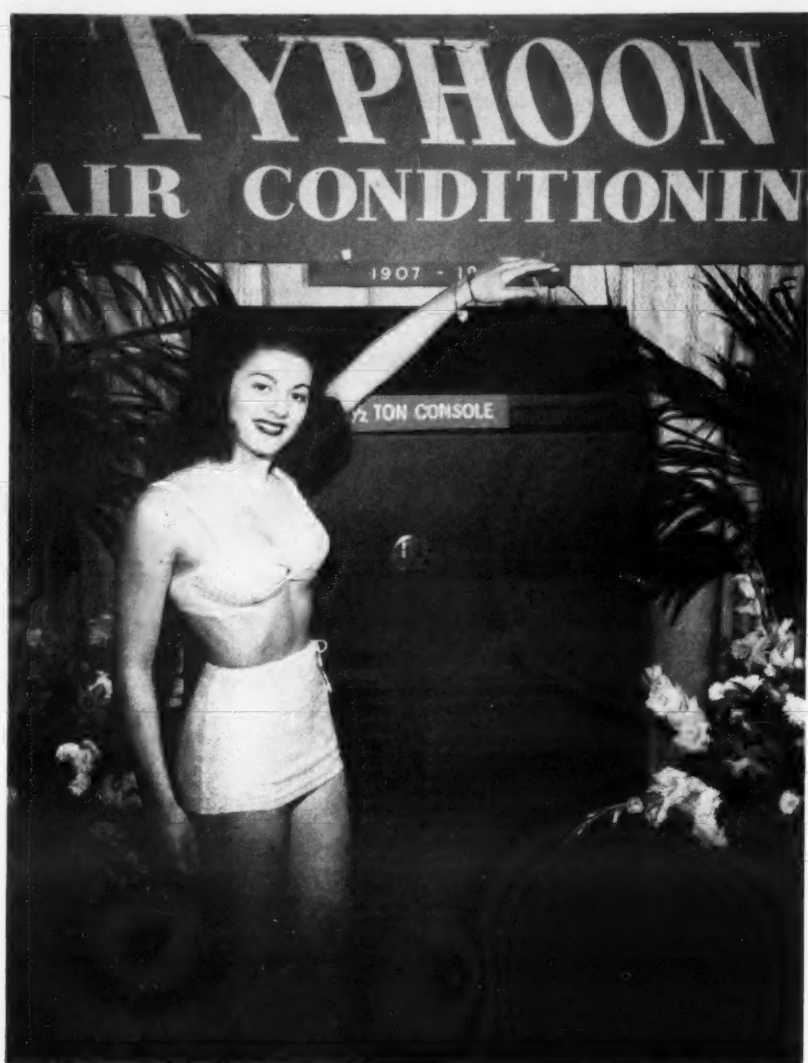
**GET ON THE  
Band  
Wagon!**

Now is the time to boost those extra sales with the Selb S-4, refrigerated display case. Ideal for bakeries, groceries, dairies, drug stores, confectioneries, liquor stores. Order the Selb S-4 today!

**SELB**  
takes only **4** feet

**SELB MANUFACTURING CO.** **ARCADE BLDG., ST. LOUIS 1, MO.**



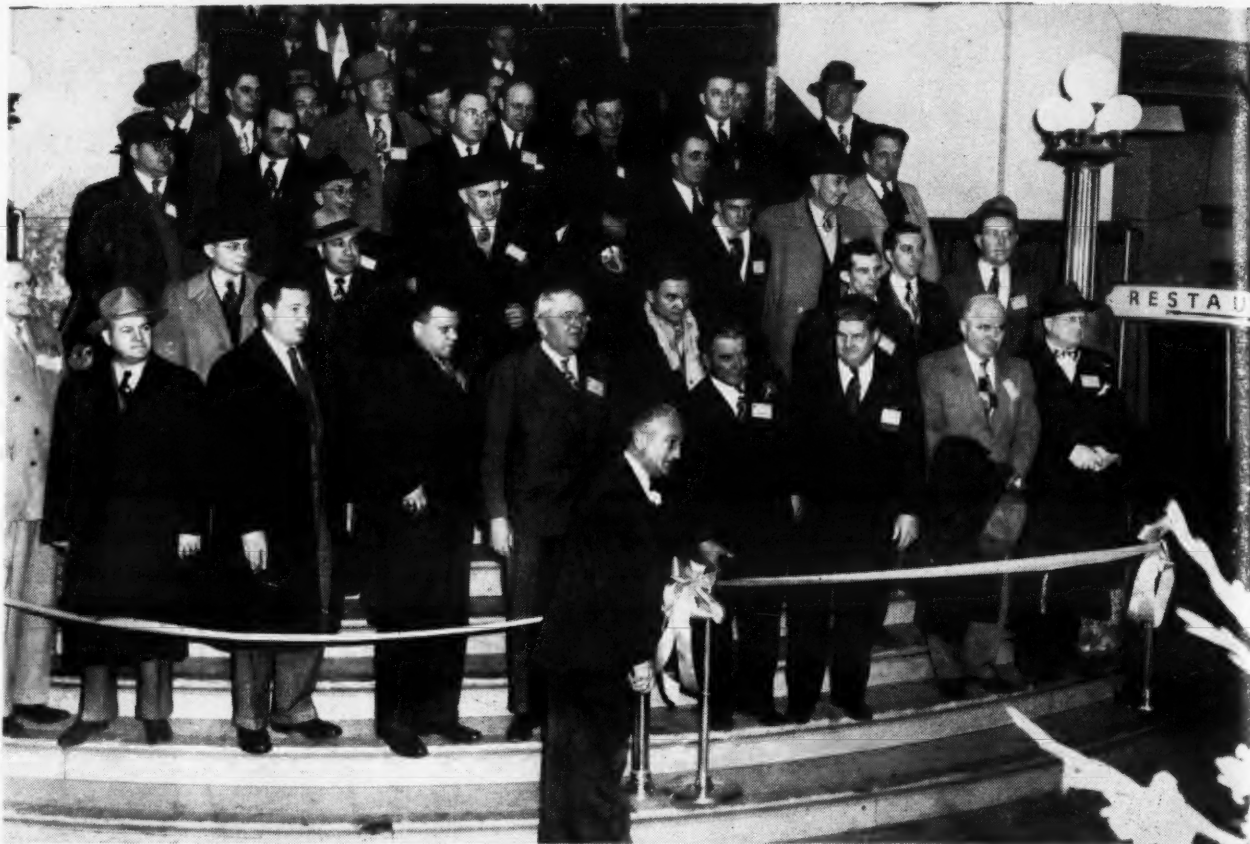


The 1 1/2-ton console model air conditioner shown by Typhoon Air Conditioning Co. had a number of attractive features. Oh, yes! The girl is Gloria Marra.



Speakers table at the Refrigeration Service Engineers Society banquet.

## Some Picture Highlights from the All-Industry Show



Throngs of eager visitors backed up the stairs of the Cleveland Public Auditorium the afternoon of Jan. 26 as they waited for F. J. Hood, Show chairman, to cut the ribbons formally opening the All-Industry Refrigeration & Air Conditioning Exposition.



D. W. May (center) of the well-known New York distributing organization bearing his name hands an order for 30 carloads of the new Fedders unit air conditioners introduced at the Show to E. A. Bonneville, sales manager, as Salvatore Giordano (front), Fedders-Quigan president, and E. M. Becker, regional manager, look on.



(Photo by Austin Jones, Kerotest Co.) Joe Oberc, Detroit wholesaler, gets "right into the middle of things" with the Cleveland Browns Majorettes, just as they were about to parade into the All-Industry Banquet.



Clayton Coulter, Lehigh Mfg. Co. sales manager, gets set for a drink from the new Hupp Corp. refrigerated drink vender.



Gadget which promotes the company's name wherever you may go is the lighted sign worn by Frank Zicarelli of Jas. P. Marsh Corp.



The Airtemp package air conditioner didn't really cool things down that much but A. J. "Andy" Langhammer, president, Amplex Division, Chrysler Corp., had his coon-skin coat on just in case.



Sloan Willis and Kenneth Cooper of Victor Products Corp. check over the new Victor self-contained candy case.



### The FOGEL Dry Storage "Bottled Beverage" Cooler



MODEL 3900



## "A SURE HIT"

*It's bound to be a sure hit for any dealer looking for an opportunity to raise his sales average. FOGEL'S Dry Storage "Bottled Beverage" Cooler out hits all other coolers in dealer sales because it is . . .*

1. Constructed of durable, all-welded steel.
2. Economical and efficient to operate.
3. Dry, clean, and modern.
4. A real space-saver.
5. Heavily insulated for complete customer satisfaction.
6. Engineered for heavy usage in all climates.

The FOGEL Dry Storage "Bottled Beverage" Cooler has outstanding eye appeal . . . eye appeal that means sales. It is so attractive that it can be used out in the open as well as under a bar. Feel welcome to write for further information concerning these, or other, FOGEL Quality-Engineered refrigeration items.

*Now Available for Immediate Delivery*  
One franchise gives you a complete commercial refrigeration line.

**FOGEL REFRIGERATOR COMPANY**  
5400 EADOM STREET • PHILADELPHIA 37, PA.  
*Quality manufacturers for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.*



# The KEY to AIR CONDITIONING

One of a series from

by James J. LaSalvia

## Air Distribution (Cont.)

### DEFLECTION OF AIR BY SUPPLY GRILLES

In selecting supply grilles one must have from the design a good knowledge of how to spread the air in the room evenly, so that no excessive air motion or drafts are encountered anywhere.

The first selection of the grilles and registers may not be exactly proper, and adjustments may be necessary after system is installed.

In order to meet these later adjustments it becomes necessary to use such types of grilles or registers which can easily meet this requirement.

There are in general six types of grilles and registers to distribute air in spaces. Each type has its own special feature of delivering air. They are: one-way or straight type, two-way, three-way, four-way, five-way, and seven-way.

Fig. 3 shows these various types, with the approximate angle deflection which each type of grille or register is assumed to have at the start.

The various air deflections from a grille or register are generally made in the angles as shown. The air is deflected by bars at the face of the grille or register, which can be either stationary or adjustable.

Grilles or registers with adjustable deflecting bars have more leeway for adjustments after the system is installed and, therefore, are more proper to use.

Referring again to Fig. 3, the one-way or straight type grille or register supplies the air in a straight direc-

tion. This type will send the air to the maximum travel or distance over all other types.

The two-way type deflects the air slightly. This deflection may be regarded as an obstruction put up by the grille or register and, therefore, will not deliver the same amount of air at the same velocity of the one-way type as far as the one-way type. To send the air to the same distance it is necessary to increase the velocity of the two-way type.

The three-way type deflects the air more than the two-way type, and therefore, for the same reasoning as the two-way type, the air in this case will not travel as far as the two-way type. Therefore, for the same amount of air as the one-way type and also the same distance of travel, it is necessary to have a velocity greater than the one-way or two-way in this case.

According to the same logic, the air from the four-way type will not travel as far as the three-way. Therefore, the air will travel the least distance with the seven-way type grille or register for the same c.f.m. and velocity.

From the above, it is obvious that with the same amount of air to travel the same distance, the seven-way type will have to have the greatest velocity; the five-way the next greatest velocity; and the one-way type the least velocity.

### SELECTION OF TYPE OF GRILLES OR REGISTERS

The various directional grilles and registers, one-way to seven-way

### Angle Deflection of Air Leaving Various Types of Grilles

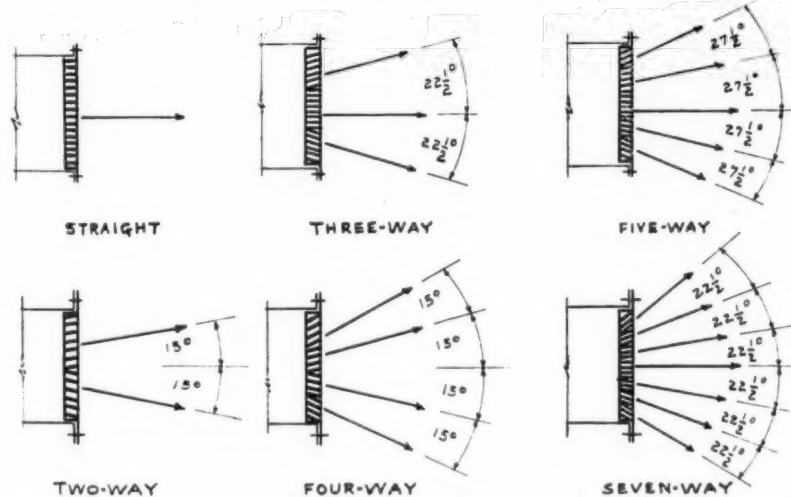


Fig. 3 shows approximate angle deflection of air as it leaves the various types of grilles.

### Suggestions for Selecting Grilles for Different Rooms

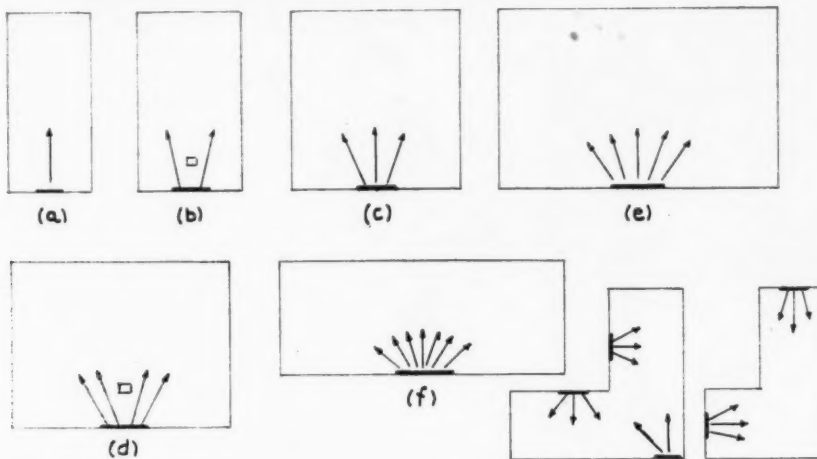


Fig. 4 indicates how various types of grilles can be used in rooms of different sizes and shapes to achieve proper air distribution.

types, are selected according to the shape of room or space.

Fig. 4 shows the types and location of grilles and registers for various types of spaces or rooms.

The two-way and four-way types may be installed behind small columns as shown under (b) and (d) if no other location of grille or register can be used.

### SIZING OF GRILLES OR REGISTERS

Two factors determine the size of the grilles and registers:

1. The "throw."
2. The height of grille or register above the floor.

The velocity sometimes is considered, but generally the throw will determine the velocity.

(To Be Continued)

### Elmira Cooling Job Presents Disposal Problem

ELMIRA, N. Y.—Work has started at the Capitol Theater which is expected to enable the operation of an air conditioning unit this summer.

Frederick Schweppe, proprietor, said the A. W. Kincaid Artesian Well Co. of Canastota, N. Y., has dug a well in the rear of the theater.

Workers struck water at 62 ft. below the ground and are now developing the well. The water will be tested soon for temperature and volume.

Another well will be drilled for disposal of water used in the air conditioning system. This is in compliance with a city ordinance which prohibits the disposal of air conditioning water in the sewer system.

### AN ADVANCED COURSE

In Refrigeration, Air Conditioning and Heating. Now taking enrollments for April 6, June 8 and September 7 classes. Write for booklet.

DETROIT AIR  
CONDITIONING INSTITUTE  
4125 GRAND RIVER  
DETROIT 8, MICHIGAN

### A GOOD CATALOG

creates good will... fosters confidence... sells more effectively than any amount of "over the counter" talk.

World's Largest Producer of Wholesale Refrigeration Parts Catalogs

National Security Bank Building  
767 Milwaukee Ave., Chicago 22, Ill.

CURTIS  
REFRIGERATION  
AIR CONDITIONING  
COMMERCIAL

For All Your  
Refrigeration and  
Air Conditioning  
Requirements

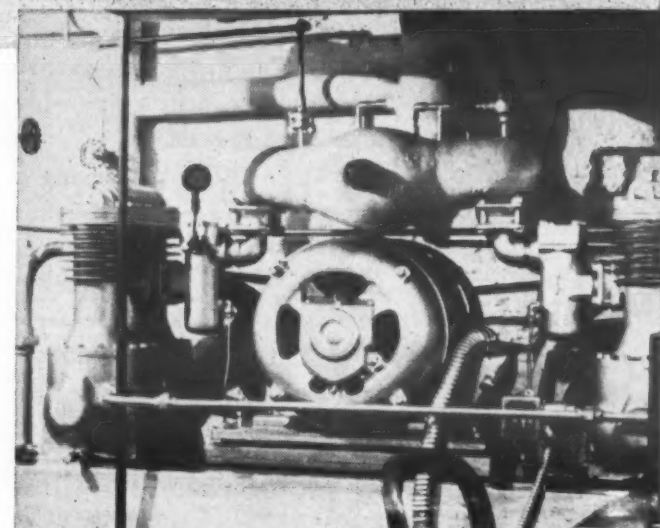
Curtis Refrigerating Machine Division  
of Curtis Manufacturing Company R-528  
1912 Kienlen Ave. St. Louis 20, Mo.  
Established 1854



Century 15 horsepower multi-speed motor operates a ventilating fan.

## Select the Right Type of CENTURY MOTOR

To Furnish Quiet, Dependable Power for Comfortable Air Conditioning . . .



Century 20 horsepower motor drives a refrigeration compressor.

The wide range of Century motors includes alternating current, single phase, polyphase and direct current motors for compressors, pumps, fans, blowers, and unit heaters.

Century air conditioning motors are widely known for their ability to start quietly and run smoothly and quietly, and for their unusual freedom from vibration.

These advantages are the result of careful design and precision manufacturing. The dependable line of Century motors includes a wide range of torque characteristics to match the widely different load requirements of air conditioning equipment.

Many manufacturers have standardized on Century motors to assure their customers that they get smooth quiet motor operation throughout a long motor life.

Century builds a complete line of fractional and integral horsepower electric motors in the popular sizes to meet the needs of industrial production, commercial and appliance needs.

Specify Century motors for all your electric power requirements.



CENTURY ELECTRIC COMPANY • 1806 Pine Street, St. Louis 3, Missouri

Offices and Stock Points in Principal Cities

# WE'VE MOVED

WE'VE MOVED to our new and larger quarters at 2850 FULTON STREET, corner of Francisco and Fulton streets, Chicago. In our new location we have the space, more modern equipment and personnel to adequately handle the ever increasing demand for RIGIDBILT Refrigeration, Air Conditioning, and Heating Equipment. RIGIDBILT'S Policy and management remains unchanged.

**RIGIDBILT, INC.**  
FORMERLY: MANUFACTURERS FIN COIL CO.  
2850 FULTON ST., CHICAGO 12, ILL.

**RIGIDBILT IS BETTER BUILT**



## for SULFUR DIOXIDE and METHYL CHLORIDE

See Your  
ANSUL WHOLESALER



These Ansul Refrigerants have a long record for DRYNESS, PURITY and DEPENDABILITY. You will like Ansul's friendly service.

REG. U.S. PAT. OFF.

**ANSUL** CHEMICAL COMPANY  
REFRIGERATION DIVISION  
MARINETTE, WISCONSIN  
Distributors for Kinetic's "Freon-11," "Freon-12," "Freon-21," "Freon-22" and "Freon-113"

Is the System Wet?  
Don't guess—**KNOW!**

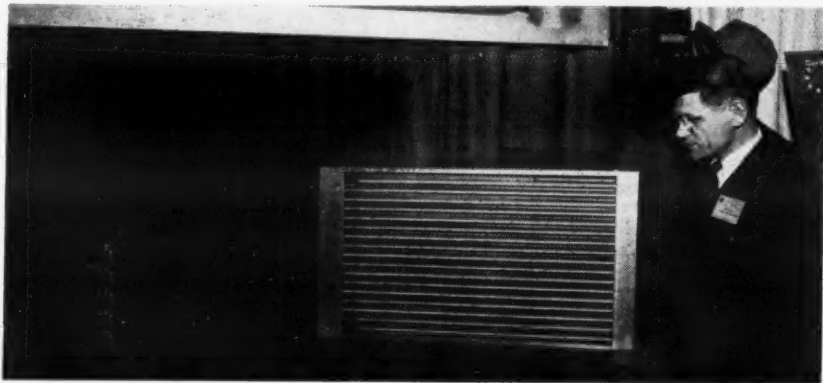
**DFN** MOISTURE  
INDICATOR  
tells instantly

For Freon and Methyl Chloride.  
Accurate . . . fast . . . inexpensive

See your jobber or write  
McIntire Connector Co.  
Newark 5, N. J.



Looking over some new Kerotest valves are (l. to r.): Mrs. Robert Gennett of Refrigeration Supplies Distributor, Birmingham, Ala.; R. E. Warwick and William Warwick of Plumbing Wholesale Co., Jackson, Miss.; J. A. Norris, west coast district manager for Kerotest; R. W. Mueller, Jr., Kerotest advertising and sales promotion manager; and Austin Jones, Kerotest district representative.



One-piece sheets of aluminum comprise the fins in the new line of coils which Kramer Trenton Co. introduced at the show. Small model at the left is for standard applications, while the large one at right (being examined by George Frie, service engineer) is specially designed for trucks and features continuous tube construction.



Eyeing the brightly finished show model of Lehigh's new 1/4-hp. condensing unit (shown publicly for the first time at the Show) are Miss June Kosash and Dewey L. Wright of Refrigeration Supply Co., Dallas-Ft. Worth, Tex.



James W. Emmett, Jr., sales manager for Jas. P. Marsh Corp., talks over the new Marsh products (which include the new pocket thermometer held by Gerald Von Tismer of NuWay Coil Service, Chicago) while Harry Kirby, Marsh sales engineer, listens in. This dial-type instrument can be recalibrated to retain accuracy. Another new thermometer, the Duo-Therm, records freezer and room temperature on the same instrument.



John F. Boynton, Refrigeration Suppliers, Inc., discusses a new truck plate refrigeration system presented by Kold-Hold Mfg. Co. with Ted Schroeder of Kold-Hold, who in his spare time stars in international tennis matches. Incidentally, Ted was wearing his shoes.



... I Like THE LINE ...  
I Like THE SERVICE ...  
I Like THEIR ENGINEERING TALENT

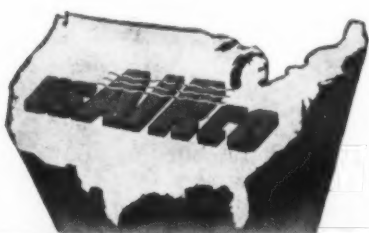
There's something about doing business with USAIRCO I like and I think you'll like.

First, there's the USAIRCO line of equipment. All top construction—all first rate in quality. Simply engineered and ruggedly built. USAIRCO has been making good equipment for a quarter-century—and when you figure that out in terms of the industry . . . it stamps USAIRCO as one of the most experienced in the field.

Then there's the service one gets from USAIRCO. The manufacturing operation is large enough to have all the benefits of mass production . . . yet not so big as to be unwieldy. You can get decisions from them . . . deliveries from them . . . in short a type of service that always seems to be extra special.

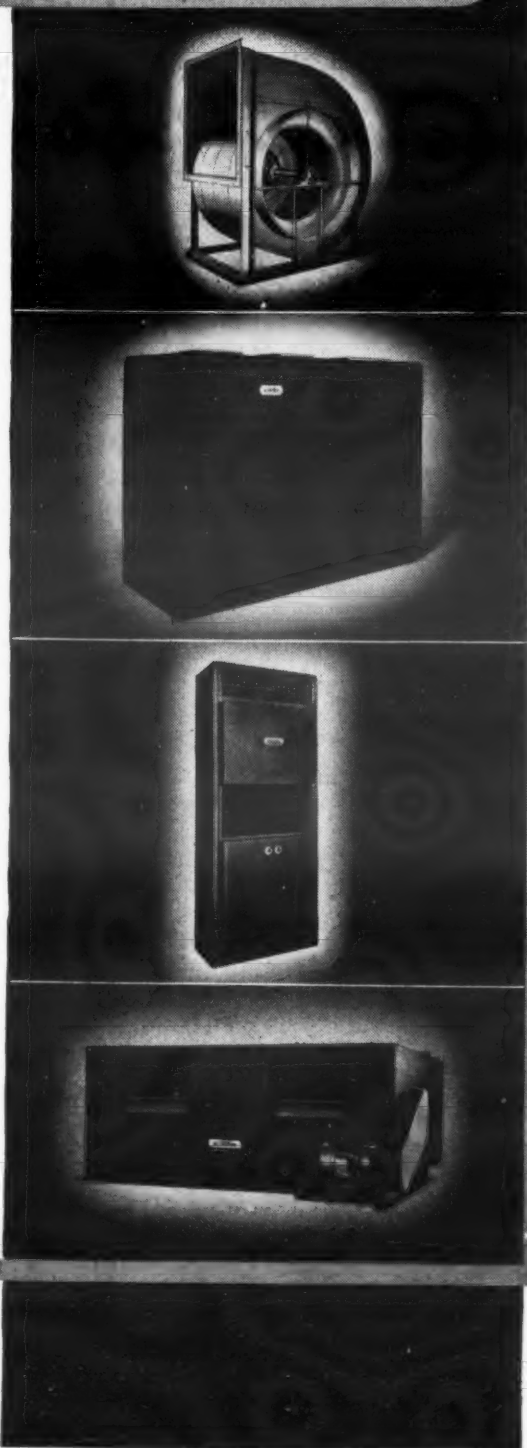
Then there's the USAIRCO Engineering staff. They have the finest equipment to work with—they have outstanding engineering talent selected from the best technical colleges. They have the accumulated experience that comes from years of working on air conditioning problems.

USAIRCO all adds up to one of the best of the good organizations in the country. Try them. I think you'll like them as I like them.



UNITED STATES AIR CONDITIONING  
CORPORATION

Come Ave. S. E. at 33rd • Minneapolis 14, Minn.



REFRIGERATION AND AIR CONDITIONING  
UNITS • PARTS • TOOLS • SUPPLIES

More and more  
Servicemen Count on **AIRO**

"We honestly find it more convenient, and infinitely more satisfactory in every way, to buy from your firm in Chicago, rather than chase around trying to find similar material here."

Washington, D. C. Dealer

Authorized Wholesaler For  
AUTOMATIC PRODUCTS • BRUNNER  
CUTLER-HAMMER • DETROIT  
IMPERIAL BRASS • JACK & HEINTZ  
MINNEAPOLIS-HONEYWELL • PENN  
MUELLER BRASS • WHITE-RODGERS

Count on AIRO to get you the right parts . . . and all the parts. Avoid chasing around town and save valuable working hours, which you can devote to NEW BUSINESS. Use the big AIRO catalog to order replacement parts after working hours! Make daylight hours more profitable by letting AIRO serve you!

Write for Catalog 47A TODAY!  
Please Write on Your Letterhead

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**AIRO** SUPPLY CO., Inc.  
2732 N. ASHLAND AVE., CHICAGO 14, ILLINOIS



### Food Center Establishes New Mark



This refrigerated self-serve display case section offers frozen foods, dairy products, luncheon meats, poultry, fish, delicatessen items, and other foods.

### 20 Self-Serve Cases In Supermarket Put Refrigeration to Large-Scale Use

WARSON WOODS, Mo.—The largest outlay of self-service refrigerator cases in Missouri food retailing history, including many used for brand-new purposes, is a feature of the Warson Woods Food Center, huge new supermarket here, with dimensions of 300 x 100 ft.

The long, narrow market is part of the Warson Woods shopping center, a development which will park 500 automobiles and offer about 50 types of retail establishments for the convenience of dwellers in suburban communities west of St. Louis. The seventeenth in the chain of Food Center stores, it is the most completely self-service operation yet constructed, according to Sam Triola, market manager.

Fifteen refrigerated, open self-service cases were provided for the new market by Hussmann Refrigerator Co. for frozen foods, dairy products, luncheon meats, poultry, fish, delicatessen items, etc. These are the new extremely-deep variety, with a much larger 45-degree slanted mirror at the top which gives customers coming into the store a clear view of the refrigerator cases' contents.

Five more refrigerated Hussmann

cases are located in the produce department, completely refrigerated, to bring the total to 20.

In back of the produce department, in a separate enclosure is a 12 x 10-ft. "produce cooler" of the walk-in variety, kept at 30° F., which makes it possible to refrigerate perishables.

Most unusual use of self-service refrigeration in the new market are two large, 8-ft. units which are devoted entirely to quick-frozen turkeys and ducks. Birds up to 22 and 24 pounds are sharp-frozen, sealed in glassine bags, and priced at anywhere from \$6.50 to \$11.50 in the self-service case—the first time such fowl have been put on a strictly self-service basis, according to Triola.

Refrigerated cases are also supplied for wines, and delicatessen products. Nine butcher-service Hussmann display cases make up the meat market, which extends more than 150 ft. down the center of the rear wall.

At the front, the market has 10 checkstands, all narrow "high-speed" types which encourage the customer to unload her shopping buggy herself, and bag her own purchases while the amount is being tabulated.

### Rochester Market Gets Year-Round Air System

ROCHESTER, N. Y.—A year-round air conditioning system is a feature of the new Star Super Market opened on Dewey Ave., the largest supermarket in the city and the thirteenth in the chain.

Air conditioning is something of an innovation in the food market field here. It is said that the controlled flow of healthfully-heated and humidified air in winter, cooled and controlled in summer, does much to preserve the freshness of food products, as well as being a boon to the health and comfort of store personnel and customers alike.

### Denihan Takes Sales Post At General Refrigerators

NEW YORK CITY—General Refrigerators Corp. has appointed John F. Denihan as district sales manager, Wholesale Division, reports E. P. Newins, vice president in charge of national sales.

Denihan will be in charge of the development of the "5-Star Dealer" organization in New York. General's two modern plants are now turning out a complete line of commercial refrigeration equipment ranging from 16-cu. ft. reach-ins to the all metal knock-down walk-in freezer, it is reported.

Denihan was previously with the Grand Rapids Store Equipment Co. as a sales executive and has a considerable experience in the refrigeration field.

## Perfection WALK IN REFRIGERATORS

BY ONE OF AMERICA'S PIONEER COOLER MANUFACTURERS



The "Bromann" Perfection cooling room has been manufactured of the highest quality workmanship and design for over 50 years.

Today this "Perfection" walk-in refrigerator is a source of added profit, a creator of new customers, and a vital and essential part of successful merchandising.

NOW AVAILABLE IN ALL SIZES

Write For Prices and Specifications

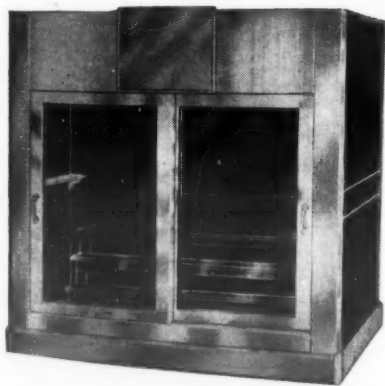
## Bromann Bros.

857 FULTON ST.

CHICAGO 7, ILL.

MANUFACTURERS OF REFRIGERATOR EQUIPMENT AND BUTCHER SUPPLIES FOR OVER 50 YEARS.

## IT'S "Character" FOR SALES



NO. 630 "CHARACTER" JUNIOR  
SIZE 6' x 3' x 7'

Our dealers agree unanimously that "CHARACTER" Floral Air Conditioned Refrigerators are outstanding in Design, Materials, Workmanship, and Construction.

Customers are impressed with its sleek beauty—its tremendous display area and its efficient, economical operation.

"CHARACTER" is the only Florist Refrigerator with the unmistakable touch of quality in every detail.

Write or call for our latest literature and prices on the "CHARACTER" line—America's most outstanding Florist Refrigerator.

"Character"  
FLORAL AIR CONDITIONED  
REFRIGERATORS  
GIVES YOU THE BIG THREE

- 1—QUALITY MERCHANDISE
- 2—CUSTOMER SATISFACTION
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Refrigerators Corp.  
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645 BROADWAY, NEW YORK 12, N. Y.  
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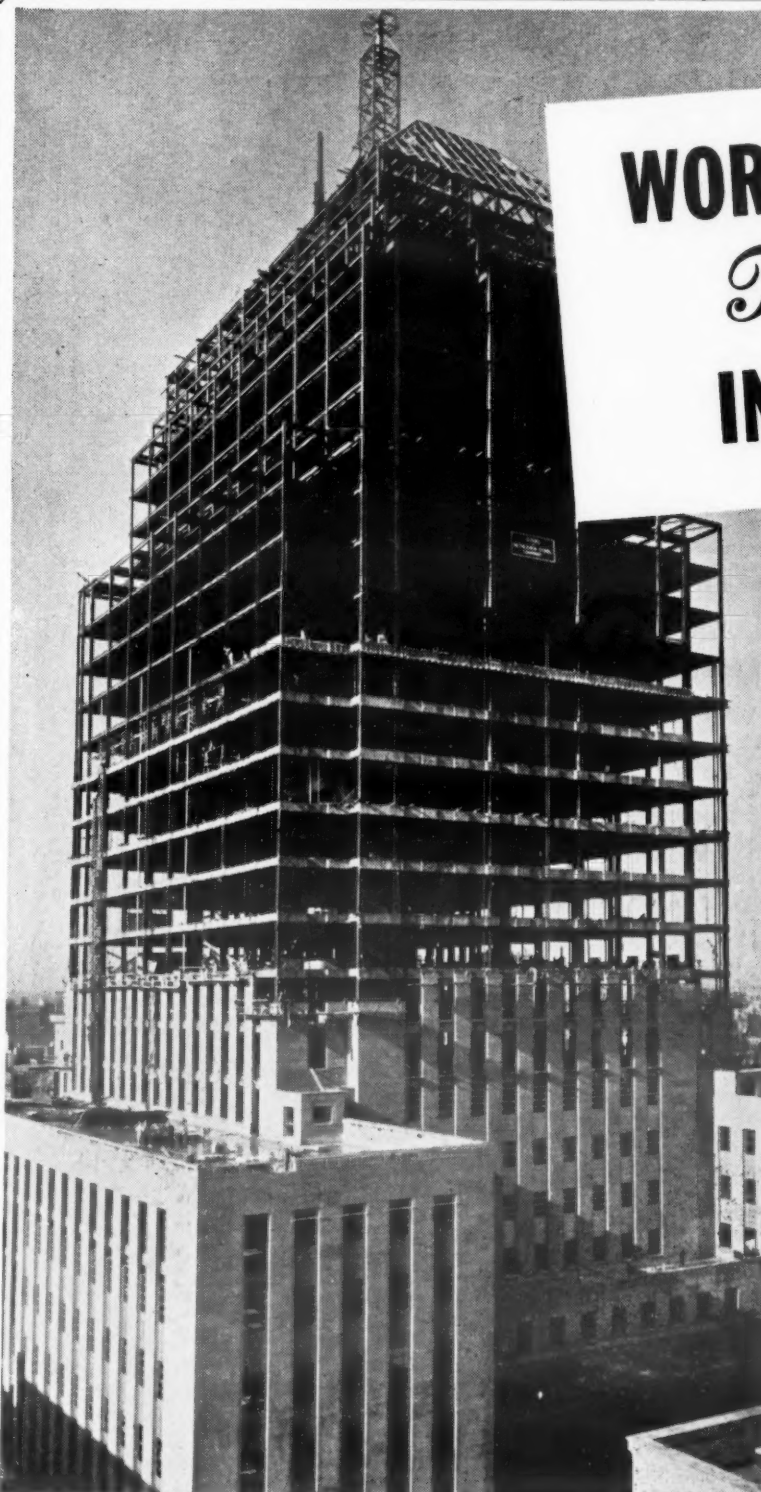
## WORLD'S LARGEST Thermopane INSTALLATION

John Hancock Mutual Life Building being glazed with 16,205 L-O-F Glass Insulating units for greater comfort, clearer vision. Architects and engineers for Boston's newest skyscraper chose Thermopane for all windows because it is the most modern glazing material available.

Providing year-round insulation, Thermopane is composed of two or more panes of glass, separated by a hermetically sealed air space. Its advantages include: more accurate and economic control of air conditioning equipment... reduced heat loss through glass... minimization of roomside condensation with controlled humidity and temperature... reduced sound transmission... and, of course, greater comfort. Because of Thermopane's metal-to-glass seal, dirt and moisture cannot enter the air space.

Thermopane is available through L-O-F Glass Distributors. Over 60 standard sizes facilitate its use in the windows of both new and old buildings.

Complete information available upon request. Libbey-Owens-Ford Glass Company, 1728 Nicholas Building, Toledo 3, Ohio.



• Every window opening in the 26-story, completely air-conditioned John Hancock Mutual Life Insurance Building in Boston is being glazed with Thermopane to provide maximum air conditioning efficiency. Architects: Cram & Ferguson, Boston.



LIBBEY-OWENS-FORD  
a Great Name in GLASS

ONLY LIBBEY-OWENS-FORD MAKES Thermopane





# Would Home Delivery Service Break Open The Log Jam on Frozen Foods Sales?

By William Carlson, Vice President,  
Metropolitan Body Co., Bridgeport, Conn.

Despite optimistic predictions about frozen food sales, it is demonstrable that the industry lacks a proper merchandising program. Abundant crops suitable for freezing, are seized upon as a break for the industry—choice products are plentiful and costs are down. So, the industry can and does render a service by protecting and storing such frozen fruits, vegetables, poultry, meats, and fish, as are in excess supply.

But getting the increased inventories used by consumers is another story. Sales fall below expectations; brokers and distributors lay off; retailers refuse to overstock; institutions, alert to changing market conditions, hold up purchases.

So, the industry tightens its belt and slashes prices. Year after year, the same thing happens, as though price cutting were the only way to greater sales volume.

The answer is simple: Despite all the ballyhoo about frozen foods, the industry still lacks the open sesame to pressure selling, namely direct access to the home.

Where would the milk business be if it were to be limited to selling to stores, restaurants and institutions? What would happen to the laundry business if you took away its house-to-house service? To the coat and apron supply industry if you denied it access to restaurants, barber shops,

butcher shops, beauticians, hotels, etc. What a drop there would be in bakers' sales if you said to them tomorrow, "No more house-to-house routes"—for instance, one baker with 100 trucks has 80 on house-to-house routes, the other 20 to stores, restaurants, etc.

Conversely, think what it would mean to the frozen food industry if it had, through its dealers, home delivery service in suitable, economical delivery units to assure low cost deliveries at subzero temperatures.

The number of trucks being used for house-to-house deliveries of frozen foods in good condition is infinitesimal. I am aware that some dairy companies are attempting to market frozen foods along with milk, but delivering a package of frozen foods (if Mrs. Housewife chooses to order same) an hour or two before she gets up and takes in the package is not so good on a warm summer morning.

## WHO PAYS BY THE WEEK?

I am also aware that some department stores are operating deliveries of frozen foods direct to the home. Mostly on a weekly order basis, provided Mrs. Housewife buys a home freezer at a cost of \$130 or more. Unfortunately, such plans limit deliveries of frozen foods to the well to do.

Surely, you can not expect the lower income brackets to lay out the cost of a week's supply in advance. You can't expect big city apartment and tenement dwellers to buy in advance when they can get fresh vegetables and fruits around the corner at curb side stands or other outlets catering to low-priced trade.

Delivery can be a sales asset and a volume asset, and just as much of a science as frozen foods can be. Delivery on an efficient and economical basis requires low first cost, of trucks, low operating cost, short wheelbase, light-duty trucks, with bodies suited to saving time in loading and working the load, so that routemen can make far more deliveries than present experts in frozen foods contemplate.

House-to-house bakers are serving from 200 to more than 300 families a day, depending on the type of delivery unit used. Laundries serve 500 to 600 families a week, collecting soiled clothes and delivering fresh, otherwise it would be more still.

Department stores, during the holiday season, deliver from 500 to 700 parcels a day from a single light, economical to operate delivery truck. House-to-house butchers serve twice as many customers as do frozen food house-to-house routemen.

Frozen food deliveries in most in-

stances are about 65 customers a day and the hope is for a hundred some day.

How is it that other industries can do so much more per truck, how is it that the frozen food industry boasts of only a few trucks where the others boast of thousands of trucks serving the homes of the nation?

## WHAT IS NEEDED?

From the lack of delivery equipment suited to home deliveries it seems obvious that the producers and distributors have not studied the possibilities. There appears to be no sound specifications for either trucks or their refrigeration and insulation available from packers and distributors for those who would retail frozen foods house-to-house.

The one set of specifications developed by others than packers and distributors calls for a 1½-ton chassis and a body which is so well refrigerated that the vehicle weight is almost 9,000 lbs. empty, and more than 10,000 lbs. loaded, which makes a costly operation on frequent stop deliveries. Wheelbase is likewise longer than experience shows is desirable in home deliveries.

## OTHER FIELDS DO IT

In an effort to be conservative and help the thinking on the subject I outline the factors to be considered in arriving at a wide solution of the question of home deliveries:

1. Experience in other fields operating house-to-house shows that economy and efficiency can be obtained only with light duty, short wheelbase trucks. By "light duty" I mean a chassis rated for not more than 1-ton of payload. By short wheelbase, not more than 9½ ft. and a bumper to bumper length of not more than 17 ft.

It is even possible that frozen food deliveries could be handled on a wheelbase of 8½ ft. and an over-all length of 15 ft. and that would further reduce first cost, operating cost, garaging cost and would save more time getting through traffic.

2. A low entrance step and a low floor level are essential in house-to-house deliveries because of the many times that routemen have to get in and out. A tired salesman is not a good salesman. By the same token, the body must have extra height so that routemen do not have to bend or stoop low in getting at the payload. This is particularly important in the frozen food fields because of the necessary insulation of the load-space, which cuts down inside body space.

3. The bodies should have extra width, because of the insulation and to permit center aisle access, using racks on both sides. This makes it easy for the routemen to get at any item or parcel or a number of them in the shortest possible time and reduces his time in the unit.

## MUST CUT COOLING COST

4. The weight of the truck must be kept down for the sake of lower first cost and lower operating cost. It is not feasible to attain economy in house-to-house deliveries with a truck that weighs 10,000 lbs. loaded and costs nearly \$5,000 delivered, painted and lettered. Therefore, a gross vehicle weight of about 7,500 lbs., including payload should be the goal.

5. The cost and weight of refrigeration and insulation must be slashed. In some cases, frozen food trucks for home deliveries are equipped with

more than a ton of refrigeration and insulation, exhausting the load capacity before a pound of payload is put in.

In other cases, where the expensive 1½-ton chassis is used, the weight of the refrigeration and insulation is more than 1½ tons, again exhausting the payload capacity.

6. Other delivery operators catering direct to homes know that the investment in the vehicle must be kept low and must be in proper proportion to the sales volume the truck can do. Frozen food deliveries must follow this common sense pattern if retailers seeking house-to-house sales are to make a profit and stay in business.

Since short wheelbase light trucks with higher, wider stock bodies are available from leading truck makers at fair prices due to competition, it follows that the reduction in the cost of units frozen food deliveries to homes must be attained through reducing the weight and the cost of refrigeration and insulation materially.

Mass production cannot itself accomplish this reduction in the cost of insulation and refrigeration equipment. The answer lies in developing much cheaper methods of insulation and refrigeration of house-to-house delivery trucks, weighing only a fraction of present methods and costing far less.

7. Uniform subzero temperature must be achieved, instead of a rising temperature. Is the industry interested? Has it done any real delving into this problem? Has it conducted any worthwhile experiments in an effort to attain these ends? Has it bothered to collect data on the relative costs of home deliveries according to size and weight of trucks, the relative efficiency of different types, heights and widths of bodies and the fatigue factor in house-to-house selling?

Isn't it a fact that if it has any interest at all in a development that could expand sales and permit efficient disposal of excess production, that interest has not been displayed beyond the point of letting someone else do it? Truck makers, with demand in excess of supply, and body makers able to sell decidedly more volume than they can produce for some time to come—are they to be expected to carry the ball without even encouragement from the frozen food industry?

Are producers of insulation materials and refrigeration equipment to be expected to go to town on a project in which packers, brokers, and distributors show so little interest and activity?

Surely, if, as is predicted, some 50% to 60% of foods of "tomorrow" will be frozen foods, then suitable house-to-house units will be essential at low cost to assure their marketing. Further, grocers, butchers, food specialty shops and department stores will need suitable trucks for their delivery or trucks with at least part of the body insulated and refrigerated, or with suitable cabinets in the bodies.

Whatever the method, light weight and low first cost, plus low operating cost will be necessary.

If the industry is interested, we would like to hear from those concerned and to work with them. By pooling data and joining of efforts, the result will be more satisfactory than if it is sought by some one group of all the groups that should be interested. By joint effort, the result should be found sooner.

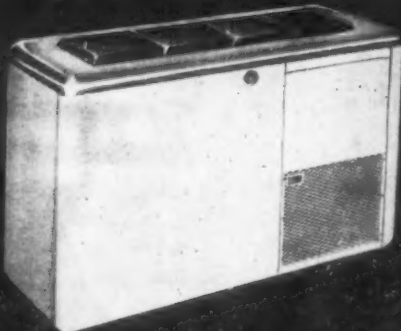


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THRU MORE FEATURES • MORE SALES

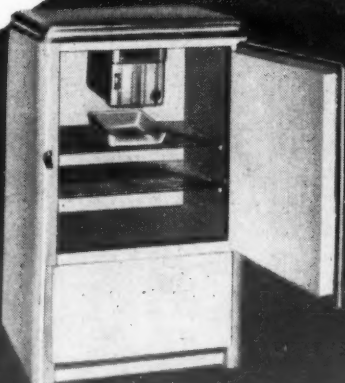
- REFRIGERATORS
- FROZEN FOOD CABINETS
- ICE CREAM CABINETS



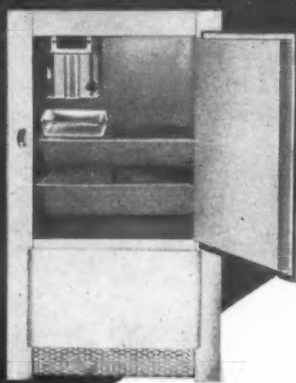
MODEL 118 DBL



ICE CREAM CABINET  
MODEL 4-IL



MODEL 41 S—Domestic



MODEL 41 T—Trailer

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No Seal Trouble  
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Deliveries  
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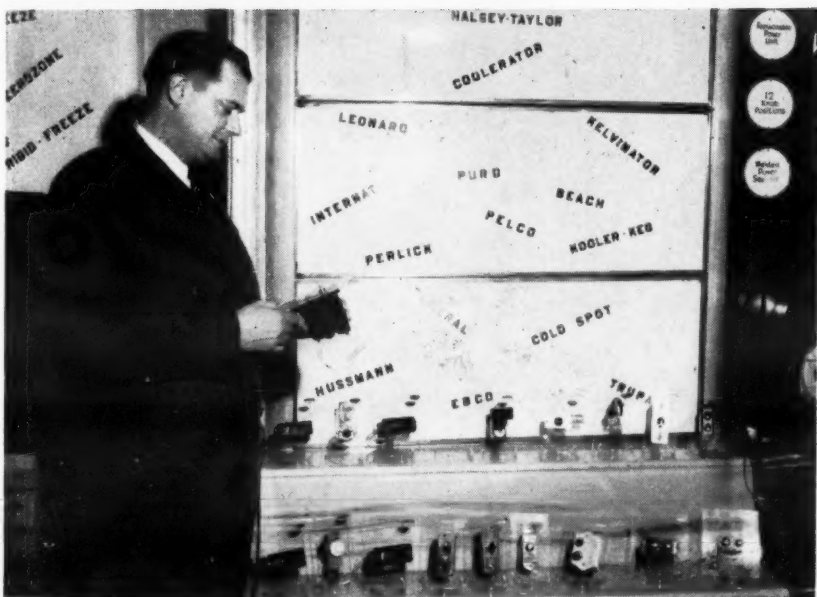




Don Walters (left) of Bergland Wholesale Supply, Moorhead, Minn., gets the details on the new Universal Cooler one-piece hydrogen-brazed condensing coils from J. E. Barker, applications engineer of Universal. The company also exhibited for the first time a 3-cylinder hermetic unit with a 4-row condenser (which will be available in 1/2, 3/4, and 1-hp. sizes), and an "F-22" single-cylinder hermetic (in 1/6, 1/8, and 1/4-hp. sizes).



Henry M. Sweeney, of the Henry M. Sweeney Co., Washington, D. C., takes a close look at the Model HX 40 beverage cooler introduced by Heat-X-Change Co. This unit will cool 40 gal. per hour from 80 to 40°, the company claims.



John G. Graham, application engineer of C. H. Walden & Co., Erie, Pa. (contracting firm), examines one of the newer controls from the large display which Cutler-Hammer had at the Show. Emphasis in the booth was on the fact that exact replacement controls can be provided simply by knowing name and model of the manufacturer's domestic box.

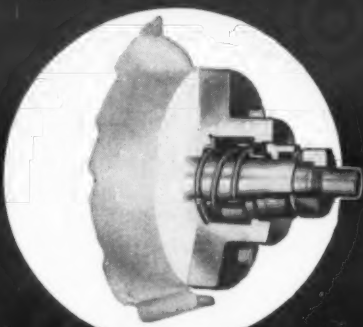
## Rotary Seal

### REPLACEMENT UNITS

are available not only for the smaller size compressors normally used for household refrigerators, but also for...

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UNIT No. 9444



Simplicity in construction...  
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*See your jobber!*

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## ★ NUMBER SIXTEEN ★

### Keep It Sold

**AIR CONDITIONING** is a continuing service . . . not just a one-time sale.

Whether it be a single room cooler, a big packaged unit serving a large area in a shop, or a complete year-round system designed to produce ideal indoor climate throughout an entire building, each air conditioning system must be correctly selected and properly installed.

If you hope to please the buyer, Mr. Dealer, and keep a toe-hold on this promising business, remember that packaged air conditioners of all types should be sold on the basis of *continuing service* to each customer. *He must be satisfied.*

To insure customer satisfaction, re-visit the purchaser *after* the sale has been made.

"Call-back" service of this nature can best be done by specialty-selling dealers who have been trained in that type of *continuous* customer-pleasing. These firms have aggressive sales organizations, educated sales engineering departments, helpful home economists, and well equipped service shops. They are after "repeat business," not just one-time sales. And so they "follow up" the sales they record on their books.

It is their hope that when an air conditioner is installed in a man's office the owner will soon want another for his bedroom and his parlor.

And after the second or third installation proves satisfactory, the specialty dealer will try to sell this customer *more* packaged cooling units to cool his entire home.

This procedure is called "step-up" selling—and it's a process which has built many successful specialty appliance dealerships throughout the entire country into highly profitable enterprises. (From the refrigerator the customer is "stepped up" to the purchase of an electric range—then to an automatic laundry, electric dishwasher, etc.)

Although many heads-of-families vouchsafe a tremendous interest in "packaged" air conditioning throughout the United States (and the World, too), room air conditioners have not yet become "shelf merchandise." Sales of air conditioning units still must be *pushed*. And so their future belongs to those pioneering specialty dealers who *believe* in air conditioning's prime **USEFULNESS**, whole-heart-and-soul.

Every prescient specialty dealer wants to build a business. He also wants to establish himself in the community he has chosen to serve. Thus it will follow that when *he* has been sold on air conditioning—as a continuing **PUBLIC SERVICE**—he will "follow up" all sales of air conditioners his firm makes, and *keep those customers SOLD*.

Eventually, if he continues to pursue this unselfish policy, he'll own a priceless loyalty in his neighborhood, and he'll be a priceless asset to the manufacturer he represents.

*This is one of a series of 26 advertisements dedicated to the progress of the entire air conditioning industry by*

## NEVINGER MFG. CO., INC.

GREENVILLE, ILLINOIS



*For Silent Operation  
and Longer Wear*  
on REFRIGERATION and  
AIR CONDITIONING EQUIPMENT  
Use  
**MANHATTAN V-BELTS**  
WHIPCORD FHP

They grip without slip.  
They flex without overheating.  
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your equipment **DEPENDABLE**.

**RAYBESTOS-MANHATTAN, Inc.**

*"Keep Ahead with Manhattan"*

MANHATTAN RUBBER DIVISION, PASSAIC, N.J.

**REFRIGERATION  
INFORMATION IN A HANDY FORM**



**\$4 COMPLETE • PAY ONLY \$1 A MONTH**

Get This Information for Yourself, Mail Coupon Today.  
No Obligation Unless Satisfied. **ASK TO SEE IT.**

**AUDEL, Publishers, 49 W. 23 St., N. Y. 10**  
MAIL AUDEL'S NEW REFRIGERATION GUIDE for free  
examination. If O. K. I will send you \$1 in 7 days; then  
remit \$1 monthly until price of \$4 is paid. Otherwise I  
will return it.

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Employed by \_\_\_\_\_ R1



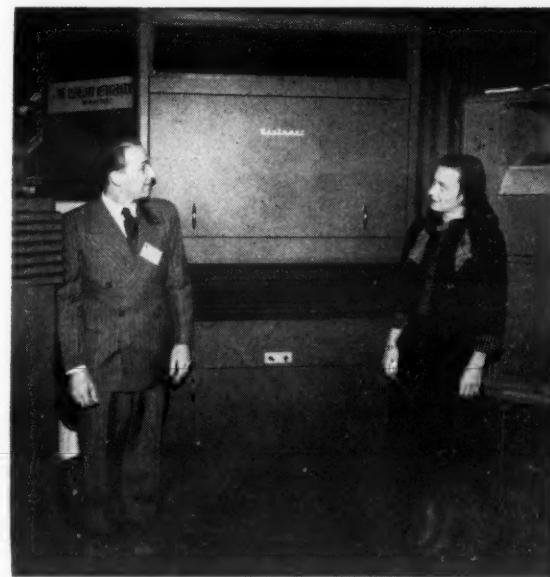
Fred Rattunde of Wood & Rattunde, Waukegan, Ill.; James O'Connor of O'Connor & Moody, Kankakee, Ill., watch Clifford Moody trying out the new Penn Brass flaring tool under the instruction of S. M. Krown (far right) of Penn Brass.



Among the number of commercial refrigerator products shown by Tyler Fixture Co. was this 22-cu. ft. self-service frozen food case. In the picture are Fred Eaton, Harderfree sales manager; Hugh Cooper, supervisor of agency sales; and Roger W. Sisson, divisional manager.



This 6-ft. Sterling refrigerated bakery display case is counter-height, and can be supplied in any finish to match other bakery fixtures. R. C. Groth, sales manager for Minneapolis Showcase & Fixture Co., manufacturer, demonstrates it to two Show visitors.



Mr. and Mrs. Carl Nevinger of Nevinger Mfg. Co. flanks a 7½-ton model of the company's 1948 High-Boy water-cooled air conditioner which was introduced at the Show.

**A Better Job**

**A Better Profit**



**NIBCO**  
**WROT FITTINGS**

*for Refrigeration and Air Conditioning*



**FOR A JOB** that insures trouble-free service and customer satisfaction use NIBCO WROT Fittings. They form perfect solder joints, stronger than the tube. Adapters are forged from red brass pipe from which refrigerant gases can't escape.

NIBCO WROT Fittings are accurately formed to close tolerances under hydraulic pressure, by a patented process. They're economical to work with because they fit. Available in all commonly used sizes. Conveniently packaged and marked for quick, easy identification in time-saving cloth sacks. NIBCO'S uniform quality assures long life, dependable service—protects your profits and builds more business.

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**ELKHART, INDIANA**

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Northern Indiana Brass Co., 301 Plum St., Elkhart, Indiana  
Without obligation please send Catalog 614.

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SEND FOR CATALOG 614  
illustrating and describing the complete  
line of NIBCO WROT copper fittings  
for refrigeration and air conditioning.



Stanley Smiley (left) plant superintendent of the Rotary Seal Co., describes some of the features of Rotary's extensive line of replacement seals for refrigeration compressors to John Sackey, Peoria, Ill.

**ITS  
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FOR "48"**

**NOW  
AVAILABLE  
IMMEDIATE  
DELIVERY**

**With  
Hinged and Sliding  
Doors**

**Stainless Steel  
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**FLORIST  
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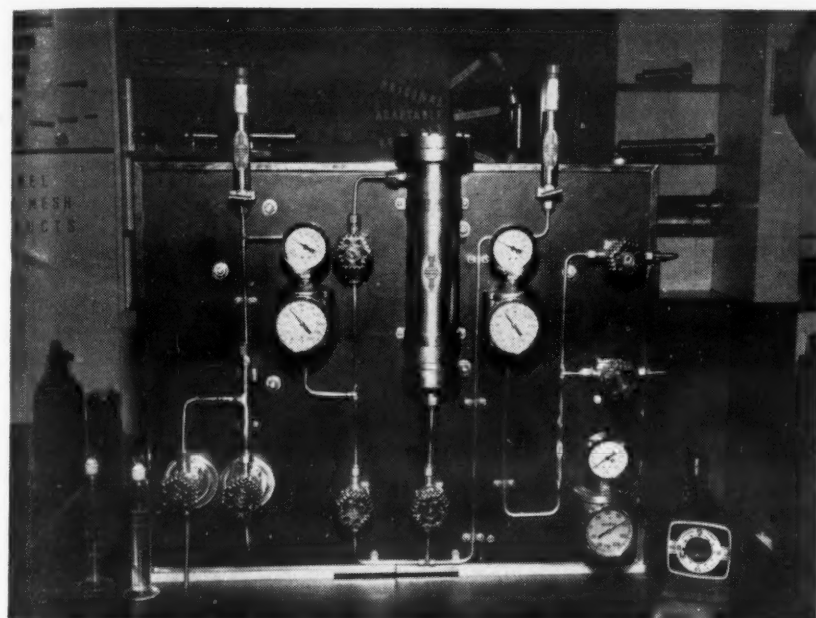
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National Production & Sales, Inc., claims its "Fishkeeper" case to be a "quadruple-duty" case because it (1) makes ice, (2) holds frozen fish, (3) holds boxed fish, and (4) by means of U-coil and bed of ice, keeps fish and seafoods (including live lobsters) at the proper temperature and relative humidity.



This display setup was employed by McIntire Connector Co. to demonstrate its new drier (in the center) which is filled with specially prepared Duval Drierite and is claimed to lower the dewpoint to  $-20^{\circ}$  in one pass and to below  $-60^{\circ}$  in 24-hour operation. One cartridge is also claimed to properly dry 10 normal 1-ton systems.



Mr. and Mrs. Alex Makul of A. & A. Refrigeration Service, W. New York, N. J., show rapid interest in the savings in size to be found in the new Ranco thermostatic control as demonstrated by H. W. Laird of the company. The new small control is not yet in production.

## DISTRIBUTORS WANTED for ROYAL DRY BEVERAGE COOLERS

Incorporating the following features:

Rust-proof Stainless Steel Interiors—Silver Soldered Peerless Fin Coils—Delco Blowers—Sliding Hard Rubber Doors—3" Fiberglass Sealed Insulation.

IMMEDIATE DELIVERY IN 4, 6, and 8 FOOT LENGTHS

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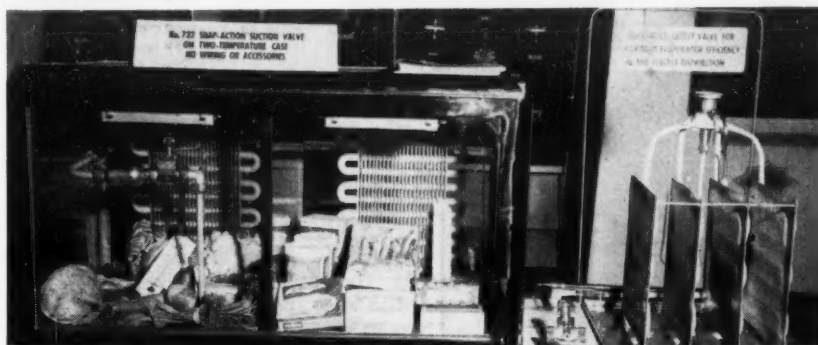
## HASCO

... now makes suction and discharge valve reeds for leading makes of Hermetic units. Look to Hasco for the best in both conventional and hermetic type compressor parts.

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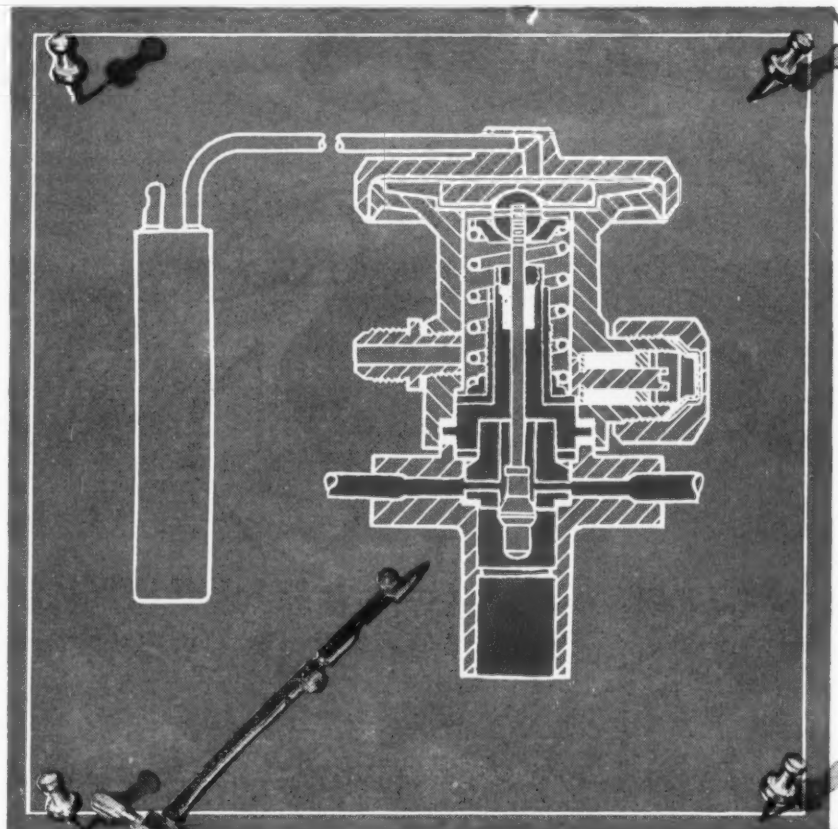
HASCO, INC.  
GREENSBORO, N. C.



Alco Valve Co. demonstrates application of its No. 732 snap-action valve on a two-temperature case and its TO4F multi-outlet valve that feeds four plates with equal distribution to all plates. In the thermopane-enclosed cabinet, the valve was holding the left half within  $2^{\circ}$  F. of  $45^{\circ}$  F. at 45 lbs. pressure. On the right, a Type 152 thermo limit valve is maintaining a  $0^{\circ}$  F. temperature with 15 lbs. pressure. Both units operate off the same compressor.



Herman Goldberg, president of Standard Refrigeration Co., explains his company's new baseboard radiation unit for house heating to Norm Proctor, Engineering Specialty Co., Gary, Ind. In the background is cutaway model of a Standard water cooled condenser.



for even refrigerant distribution throughout the circuits



The liquid refrigerant is accurately metered at the point of expansion to all evaporator circuits. Equal distribution is accomplished before pressure reduction causes the separation of gas and liquid.

The Alco Multi-Outlet Valve, in thousands of installations, has improved coil capacities up to 25%.

It is simple in construction and provides stable control under all load conditions. Equal distribution is maintained regardless of superheat changes.

Your wholesaler can supply you with the proper Alco Multi-Outlet Valve: available for  $\frac{1}{2}$  to 50 tons FREON-12, 2 to 36 outlets. Ask for our Bulletin 180.



Designers and Manufacturers  
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Pressure Gauges  
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★The gauge with the  
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JAS. P. MARSH CORP.  
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Atlantic City's Hotel  
Of Distinction

A Hotel Planned and Designed for Your Every  
Comfort . . . assuring you absolute Rest and  
Relaxation . . . amid an Atmosphere of  
Refinement . . .  
Beautifully Furnished Rooms . . . Ocean Front  
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Water Baths . . . Cuisine Unsurpassed.  
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OPEN ALL YEAR

Under Ownership  
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## Equipment For Sale

Immediate delivery subject to prior sale—

260 new 1/4 H.P. Tecumseh Compressors,  
Model FS-14-U2H Twin Cylinder High Back  
Pressure Type with 1/4 H.P. motors (not  
attached) \$49.00 each F.O.B. Shipping Point.

Also Available copper sheets, sealing com-  
pounds, pallets, panelyte, etc. at reduced prices.

Box 2669

Air Conditioning & Refrigeration News

## 'Information Please'

**Question:** How should one calculate the heat load on an open self-service case?

**Answer:** Open-type self-service cases are subjected to wide load fluctuations due in part to the way the store manager arranges his displays, to the section of the country in which the case is located, and other factors.

The best answer is to follow the manufacturer's instructions given for that particular piece of equipment. The manufacturer's data is determined by laboratory and field tests.

**Question:** Should an open case be hooked on to a machine which is already connected to a walk-in cooler?

**Answer:** No. An open case should not be hooked on to the same machine as a walk-in cooler. Or, for that matter, with any equipment that calls for a difference in temperatures. Even two open-type cases requiring different temperatures should not be hooked on to the same condensing unit.

**Question:** Sometimes open-type equipment has been moved and a new machine installed. How is the serviceman in this case to know what size machine should be on the fixture?

**Answer:** When called on to service any piece of equipment with which you are not familiar, go to the dealer or the distributor who sold that equipment. Lay your cards on the table and ask him for all the data on that equipment and the manufacturer's recommendations. It is impractical for the serviceman to try to check

At every large meeting conducted by the Refrigeration Service Engineers Society, it is customary to hold an "Information Please" session before the regular meeting begins. Questions asked by the audience are answered by a "board of experts," who are aided frequently by comments from the floor. The following are some of the most interesting questions-and-answers which came out at the recent RSES annual meeting in Cleveland.

heat loads. There are too many variables.

**Question:** You as a manufacturer of cases specify what unit should be used, but unit manufacturers have so many different body sizes on units. I suggest that manufacturers of cases and walk-ins get together with unit manufacturers on this.

**Answer:** There is a trend in the industry toward standardization of electric motors. You are going to find less variation in compressor body sizes in the future than in the past. There is a movement under way to decrease the loading on motors. Motors have been so abused generally that when peak loads are reached in the summer time, they kick out.

Motors will now be marked with B.t.u. capacity as well as with horsepower. The serviceman will then be able to match up the motor with a condensing unit of similar capacity.

**Question:** At what back pressure should a 10-hp. "Freon" machine operate on an aerator for milk cooling which has direct expansion on the bottom and sweet water on top?

**Answer:** Run the refrigerant through the DX section at a minimum of 33° F. because at 32° F. it will freeze out some solids. If the condenser is at some distance from the unit, the pressure can be lower. A refrigerant pressure of not less than 31 lbs. should be maintained in the evaporator in order to prevent the milk from freezing.

From the floor, one service engineer stated that he found that due to the arrangement of coils there was a pressure drop of 5 or 6 lbs. and the pressure can be 24 or 25 lbs. at the compressor. From the platform, it was noted that if the pressure at the compressor goes down to 18 lbs.—the full capacity of the unit is not being used.

**Question:** We have a dairy plant using calcium chloride brine and "Freon-12." About every six months we have to recharge the system, but we can't find the leak. Perhaps the leak is in the brine tank. Could we take a sample of brine, heat it in a test tube, and use a leak detector on fumes for "Freon-12" to make sure that the refrigerant is leaking into the brine?

**Answer:** Heating a sample will drive off fumes readily which can then be detected, provided, of course, there is a sufficient concentration of the refrigerant in the solution. A small amount of sulphur dioxide could be placed in with "Freon," even though that's not generally recommended, and then the solution could be readily tested for the presence of

sulphur, using ammonia.

There are not satisfactory chemical solutions which will detect "Freon." It might be possible to use tracer materials, but these aren't too satisfactory.

If a water-cooled condenser is employed in the system, the leak might be occurring there as well as in the brine tank. Checking for presence of "Freon" in the condensing water could be done in the same manner as with the brine solution, although it may be advisable to temporarily cut off the flow of water to build up a concentration of refrigerant for testing.

It was also suggested that the leak might be occurring at one pressure only. One RSES member pointed out that he had had similar difficulties and finally learned that the receiver connections seemed to have enough elasticity to develop leaks at a certain pressure, although there was no leak above and below that pressure point.

**Question:** We have an ice cream cabinet installation that loses part of its charge every three months. We can't find the leak, and some of the lines are in concrete.

**Answer:** It is suggested that you cut off and plug the lines running through the concrete and then attach a drum of dry air or nitrogen under pressure to these lines for 24 hours. A drop in pressure will indicate that the leak is in the lines in the concrete.



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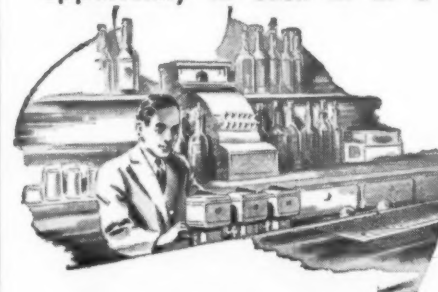
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Multiplex—The Original Mixing Faucet, model of simplicity and durability for over 40 years.



## Little New at N.Y.--

(Concluded from Page 1, Column 2)  
tion show, while many control manufacturers were conspicuous by their absence.

Considerable orders were being placed at the show, chiefly because the buyers said they were anticipating price increases later in the year.

Among products or models being publicly shown for the first time were Worthington's 5-hp. package air conditioner powered by a hermetically-sealed, "motor-mated" compressor; U. S. Air Conditioning Corp.'s unit for cooling and heating individual rooms in hotels, apartment houses, etc., by means of hot or cold water piped from a central source; Chrysler Airtemp's 3/4-hp. room air conditioner; and Curtis' 10-ton, central-type air conditioner.

Also new were Niagara Blower Co.'s aero-pass condenser handling about 60 tons of refrigeration; W. B. Connor Engineering Corp.'s new Dorex self-contained apple storage air purification unit and Type C air recovery cell, the automatic washer which makes Raytheon's industrial precipitator self-cleaning, a window model of Palmer Mfg. Corp.'s evaporative cooler, and a humidifier and evaporative cooler by Farr Co.

In the instrument field, Anemostat displayed its new air meter for measuring air velocity and temperature and static pressure, and Illinois Testing Laboratories, Inc., presented a new miniature direct-reading air velocity meter and Thermo-Anemometer for measuring very low velocities.

Davis Engineering Corp. of New York City showed a "Freon" condenser and receiver which it has been producing for marine applications but which it is now going to make available for the stationary field.

Another item of interest was a new "in-a-jacket" forced filtered air clothes dryer made by Roberts-Gordon Appliance Corp. as part of its conventional forced warm air winter air conditioning units. The dryer lists at \$75.

## Albert Rebel Appointed Recold Export Manager In Latest Expansion Move



LOS ANGELES—Continuing the expansion program set up a few months ago, Refrigeration Engineering, Inc., Los Angeles, has just announced the appointment of Albert Rebel as export manager, according to a statement made by Hy Jarvis, vice president and general manager.

Rebel's appointment follows several other important changes made by "Recold" when the firm decided to expand distribution of its products to cover the entire national and international markets.

Rebel brings to the "Recold" organization a wide background in the commercial refrigeration industry. He is said to be one of the best known and most widely travelled export men in the field. For the past 18 years, Rebel has been in full charge of the export division of the Super-Cold Corp. and in this position he established an unusual sales record.

The new "Recold" export manager explained that there are three factors which he considers important in setting up worthwhile export distributors. First, it is important to make permanent friends, second, promises made must be kept, and finally, obsolete equipment must never be shipped to export markets.

One of the main reasons why Rebel has been able to hold the valuable export connections, it was explained, is because he has continually made it possible for his distributors to handle a full line of commercial refrigeration equipment, in spite of the fact that many manufacturers in recent times have not manufactured a complete line.

## Lighter, More Compact Conditioners Seen

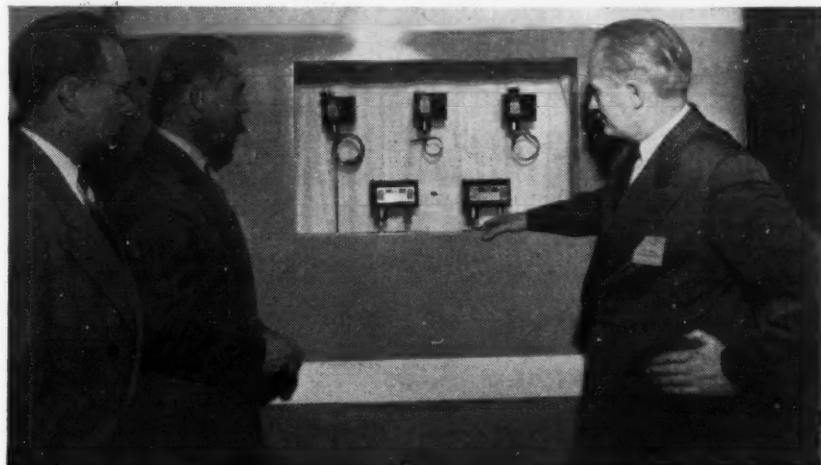
WASHINGTON, D. C.—Design trends of the future for air conditioning equipment will be toward lighter and more compact units to save weight and space, in the opinion of A. E. Stacey Jr., director of application engineering, Carrier Corp.

Speaking before the Washington Society of Engineers at the nation's capital, Stacey, a pioneer of the industry as one of the founders of Carrier, also forecast trends toward further increase in efficiency, easier servicing, and corrosion resistance.

Reviewing the growth of the air conditioning industry, Stacey cited five periods of development as follows: basic equipment, starting in 1900; automatic humidity controls, starting in 1906; air distribution, 1910; unit type of air conditioning, 1916; and extended surface heat transfer and centrifugal refrigeration, 1920. All of these developments being constantly improved.

"There is one phase of air conditioning which is not always remembered—formulae and equipment are necessary, but so, also, is a skill, which in its best form becomes an art, in the application of these developments to any definite requirements," Stacey said.

"The field of air conditioning covers not only the control of conditions in an enclosure for human comfort and efficiency, but also physical changes in hygroscopic materials and the control of the rate of chemical reactions."



Looking over the new type 270 line of refrigeration controls with double pole construction just being put into production by Penn Electric Switch Co. are (from left to right): G. O. Saunders, Detroit; John P. Wulie of the New England Technical Institute, Providence, R. I.; and R. H. Luscombe, sales manager for Penn Electric Switch.



Intrigued by the little 3/40-hp. condensing unit exhibited by Jack & Heintz Precision Industries, Inc., at the All-Industry Exposition, are D. I. Lloyd and E. Moyse, both service representatives. Feature of the Jahco exhibit was the demonstrator board in the background showing refrigerant action in full-flooded, semi-flooded, and dry expansion systems.

## Developments In Oil Heating Equipment Make Attendance at April Exposition Necessary--Hess

NEW YORK CITY—A. E. Hess, managing director of Oil-Heat Institute of America, reports that preliminary descriptions received by him of new and modern oil burning equipment which will be shown at the Silver Anniversary National Oil Heat Exposition make it a "must" for distributors and dealers to plan to attend the exposition at the Chicago Coliseum April 5-8.

"Significant improvements and important trends will be noted which sellers of equipment must see with their own eyes and discuss with the trade generally if they expect to keep up with these fast-moving times," Hess said.

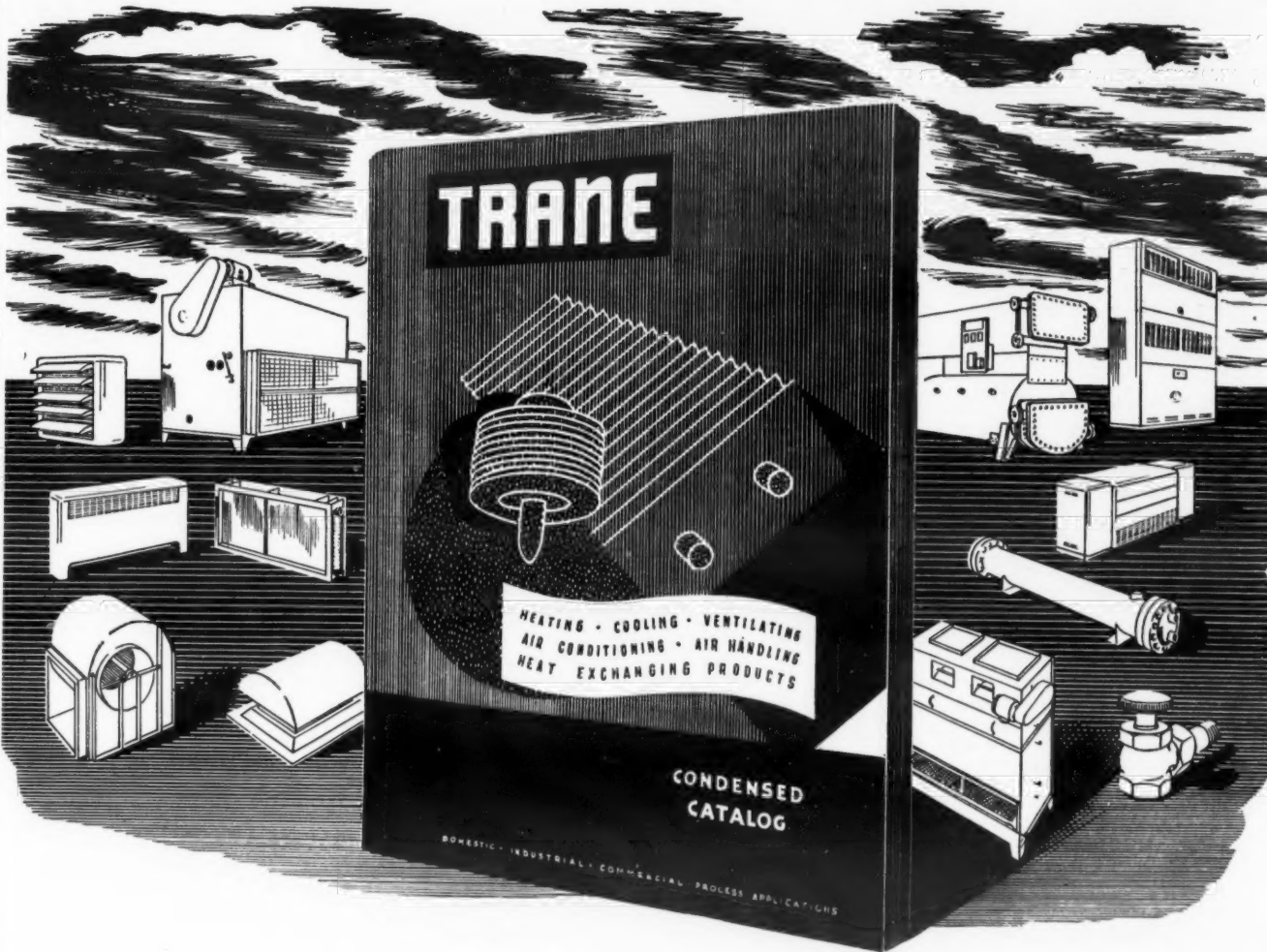
"First-hand contact is particularly important this year. Last year oil burning equipment practically sold itself. This year evidence points to our having to adjust our selling to certain circumstances.

"At the annual convention held in conjunction with the exposition, there will be authoritative talks and gen-

eral discussions on engineering improvements, on sales methods, on the problems of the industry and how to meet them. To keep in step, it is necessary to be there and see and participate.

"Besides it will be an historic occasion—celebrating 25 years of industry progress. There will be entertainment for the ladies who are cordially invited. At the annual banquet top-flight entertainers will be heard, and dancing will follow."

Because of continuing heavy demand for hotel accommodations in Chicago, a Housing Bureau has been established by OHI in order to assure efficient service to members of the industry visiting the Silver Anniversary Exposition and Convention April 5 through 8. Everyone planning to attend is urged to make immediate hotel reservations by sending first, second, third, and fourth choice of hotel to Convention Housing Bureau, 105 West Madison St., Chicago.



## More and More Jobs Need Heating and Cooling . . BE READY TO HANDLE Both . . WITH TRANE PRODUCTS

Job after job now calls for both heating and cooling. Since the functions are so closely allied, often being accomplished with much of the same equipment, heating and air conditioning *must* be considered together.

Architects, engineers, and owners prefer a minimum of contracts and responsibilities—so the contractor who can bid on the whole job has a much greater chance of getting it. The contractor who cannot bid on the whole job may likely lose it to one who can.

Heating and air conditioning are so closely related, from figuring the job through installing it, that it is only logical for the contractor to grow with the industry by combining heating and air conditioning. In this way, the contractor has peak business the year around, and is assured of a steadily increasing market

in remodeling and modernization work, as well as in new construction. Just as the contractor needs both heating and air conditioning to make his service complete, the heating and air conditioning industries need additional contractors so that they can expand to meet the enormous demand.

Trane is the ideal source of supply for the independent contractor who combines heating and air conditioning. The complete Trane line includes every necessary product for entire heating and air conditioning systems—giving the contractor the undivided responsibility of *one* manufacturer. Trane field engineers in 85 field offices are constantly available for help and advice in any phase of heating and air conditioning.



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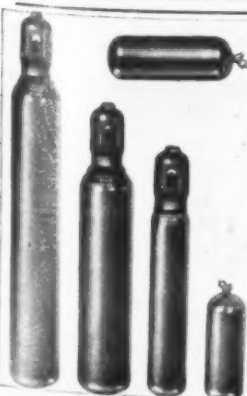


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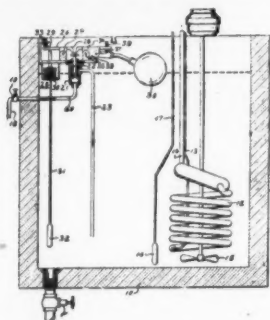
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# PATENTS

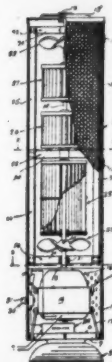
Weeks of Dec. 2 & 9

**2,431,721. TEMPERATURE AND LIQUID LEVEL CONTROL FOR REFRIGERATION APPARATUS.** Woodrow W. Wiseman and Gordon K. Terry, Springfield, Mass., assignors to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania.



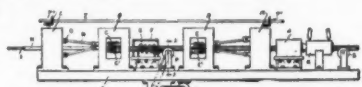
1. In apparatus of the type wherein liquid is stored in a tank and is cooled therein by a refrigerating unit, and from which tank the cooled liquid is periodically withdrawn, and in which the liquid is supplied to the tank from a source under pressure under control of a single valve means, the combination with said single valve means, of means responsive to the temperature of the liquid in the tank for controlling said valve means, and means responsive to the level of the liquid in the tank for also controlling said valve means.

**2,431,724. AIR CIRCULATOR AND PURIFIER.** Arthur E. Aydt, St. Louis, Mo.



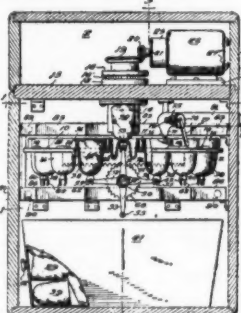
1. An air circulating device comprising a vertically elongated foraminous casing, a vertical shaft mounted in said casing for rotation on its axis, an electric motor in the lower part of said casing drivingly connected to said shaft, an updraft fan on said shaft above said motor for drawing air through the lower end of said casing from the region of the supporting surface on which said casing is supported and for driving air upwardly through said casing, a siccoco blower means on said shaft above said updraft fan for projecting air radially outwardly through the sides of said casing, and a downdraft fan on said shaft above said siccoco blower means arranged to further laterally disperse through the sides of the casing air rising through said siccoco blower means from said updraft fan.

**2,431,863. APPARATUS FOR FORMING FINNED TUBING.** George E. Clifford, Detroit, Mich., assignor to Calumet and Hecla Consolidated Copper Co., Calumet, Mich., a corporation of Michigan.



2. An apparatus for forming finned tubing comprising a plurality of spaced complementary partial fin forming units in axial alignment each including a plurality of fin forming rolls arranged about the periphery of the work, an annealing furnace arranged between said units through which the work passes, means for driving said fin forming units in timed relation to each other, and an auxiliary means for advancing the work intermediate said units comprising a grooved roll for engaging the work, a driving means and a variable speed transmission between said driving means and roll whereby the latter may be driven at the same peripheral speed as that imparted to the work by said fin forming units.

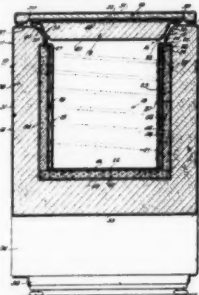
**2,431,916. ICE-CUBE MAKING MACHINE AND ART OF EJECTING THE CONTENTS OF RECEPTACLES.** Orville S. Caesar, Barrington, Ill.



1. A device of the class described comprising, a rotatable carrier having thereon a pocket having a portion adapted to be moved from a receiving to a discharge position, a rotative member, and means thereon and on said pocket adapted to be coupled and while coupled to move the pocket to discharge position and restore it to receiving position.

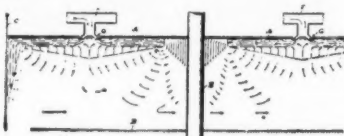
**2,432,042. REFRIGERATOR CABINET CONSTRUCTION HAVING MEANS TO RESTRICT MOISTURE IN THE WALLS OF THE CABINET.** William E. Richard, Evansville, Ind., assignor to Seeger Refrigerator Co., a corporation of Minnesota.

1. In a refrigerator cabinet construction, the combination of an inner liner of heat conducting material with an outer shell, insulating means for joining the liner and shell adjacent an opening in said cabinet, said liner including means for the circulation of cooling refrigerant, porous insulation between the shell and liner, and a relatively thin insulating



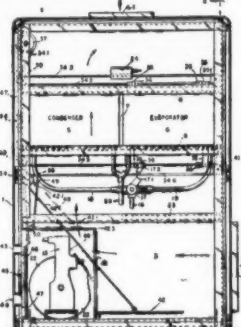
envelope surrounding the liner and located adjacent thereto, said envelope being sealed against the access of moisture to the insulation of the envelope, for establishing a temperature differential between the liner and the outside of said envelope, and an insulating closure for closing said opening and having engagement with the outer shell outside of said insulating means whereby there is air communication between the insulating means and the interior of the inner liner whereby moisture in the air finding its way into said porous insulation will be condensed on the liner and kept away from the porous insulation to maintain the latter in a dry and high insulating state, said insulating means between the liner and shell comprising breaker strips which are not sealed against the passage of moisture so that the moist air which may get between the shell and liner may have its moisture taken into the inside of the liner at the breaker strips to be condensed on the liner.

**2,432,289. VENTILATING SYSTEM.** George S. Dauphinee, Brooklyn, N. Y., assignor to William B. Connor, New York, N. Y.



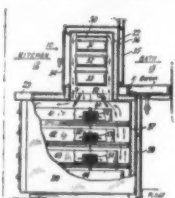
1. An air or gas diffuser comprising a casing for connection to a supply duct and a deflector member spaced with respect to said casing to define a tubular discharge passage, therebetween, means mounted at the outlet opening of said discharge passage for blanking off a portion of said outlet opening and prevent discharge through said portion, said means having a flat surface normal to the discharge stream and such surface having at least such a width that said blanked off portion will not be less than 5% of the area of said outlet opening, whereby the discharge stream will be divided into alternate forced directional flow areas and turbulent areas.

**2,432,316. HEAT PUMP.** Emory N. Kemler, Birmingham, Ala., assignor to Muncie Gear Works, Inc., Muncie, Ind., a corporation of Indiana.



1. I a heat pump, a compressor, a condenser, and an evaporator connected in refrigeration cycle relation to each other, a housing enclosing said compressor, condenser and evaporator and having an inlet and an outlet for directing air to and from said condenser and evaporator, partition means forming separate air ducts for such air flow, movable closure means for alternatively opening one and closing the other of said ducts, respectively, said compressor being located in said housing between said air inlet and said air ducts, and movable partition means interconnected with said movable closure means and adapted to expose said compressor to the incoming air when flowing to the condenser and to isolate said compressor from such air when flowing to the evaporator, vents for directing external air about said compressor, and closure means for said vents interconnected with said movable partition means to open said vents when said movable partition means are closed and vice versa.

**2,432,397. SETBACK REFRIGERATOR.** Guyon L. C. Earle, Forest Hills, N. Y., assignor, by direct and mesne assignments, to Hugh S. Wertz, as trustee.



1. A refrigerator unit comprising a lower enclosure member having a back wall, side walls and a front wall, an upper enclosure member located above said lower enclosure member and having a back wall the rear plane of which is in front of the rear plane of the lower enclosure member, side walls and a front wall, each of said enclosure members having a space adapted to be refrigerated, an evaporator, at least a large portion of which is located in said upper enclosure member, and means including said evaporator for causing both of said enclosure members to be refrigerated.

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**REGIONAL SALES Manager and/or salesman.** Large General Electric distributor of air conditioning, heating and commercial refrigeration equipment offers opportunity of permanence and advancement to capable sales leader. Products of advanced design, competitively priced. Supported by powerful nation-wide advertising and promotion. Applicant must know dealer operation, specialty selling, merchandising; be able to help train dealers' sales forces and, above all, possess sound business judgment. Territory to be covered Northeast Texas. Executive co-operation assured. Write fully stating experience, qualifications and salary desired to Mr. Hugh Martin, MARTIN-JOHNSON ENGINEERING CO., 409 N. Pearl, Dallas, Texas.

**GENERAL ELECTRIC distributor** requires air conditioning engineer, experienced, ambitious, good salary, bonus. Write or call STERLING REFRIGERATION CO., 223 Ellison Street, Paterson, New Jersey.

**EXPERIENCED MEN:** Due to expansion program, we are interested in several men to teach in large refrigeration and air conditioning school. Teaching experience preferred but not necessary. Full time job. Salary and opportunity above average. When applying state qualifications. Write: UNIVERSAL TRADES SCHOOL, 4030 South 13th St., Omaha, Nebraska.

**WANTED REFRIGERATOR cabinet design engineer.** Modern new Midwest refrigerator factory. Inquiries kept confidential. BOX 2639 Air Conditioning & Refrigeration News.

**SALES ENGINEER wanted!** Experienced in commercial refrigeration and air conditioning by old, well established firm in Southwest. Have Frick Company state agency. Thorough experience in selling and installation necessary. Splendid opportunity for the right person. Give full qualifications in writing. Address BOX 2662 Air Conditioning & Refrigeration News.

**SALES OR application engineer**—prominent manufacturer of automatic control equipment has position for well qualified engineer. Experience in sales or application engineering of automatic controls desired. This is an excellent opportunity for a capable man who wishes to become associated with a progressive concern. In reply, which will be confidential, give age and full details of education and experience. BOX 2664 Air Conditioning & Refrigeration News.

**ESTABLISHED WHOLESALE supply house** in Florida has immediate opening for a man with sales and managerial ability and experience in refrigeration and air conditioning. Some traveling. Compensation in keeping with results and with opportunity for qualified man to become member of firm. Give details first letter. Confidential. BOX 2667 Air Conditioning & Refrigeration News.

**SERVICE MANAGER**—For aggressive sales and service company located in Northern Ohio. Service Department personnel consists of 20 people. This is a permanent position with unlimited possibilities. Requires a manager well qualified to supply mechanical information and organize office and service procedures. State previous experience, when personal interview may be arranged in first letter. Unless you can qualify for a \$7,000 to \$8,000 position, please do not reply. BOX 2674 Air Conditioning & Refrigeration News.

**YOUNG MAN** about forty to take charge of production of woodworking plant. Must have drafting knowledge and experience building refrigerators and store fixtures. Excellent opportunity to join one of the most progressive organizations of this country in business over 20 years. BOX 2675 Air Conditioning & Refrigeration News.

**EXPERIENCED SALES Engineer** for national line of commercial refrigeration to contact dealers and distributors only in Oregon and Washington. State age, experience, residence and all other information including photo in first letter. BOX 2676 Air Conditioning & Refrigeration News.

**COMMERCIAL REFRIGERATION Salesman** for Detroit area. Wonderful opportunity for promotion with fast growing organization. Full line of well known merchandise. BOX 2677 Air Conditioning & Refrigeration News.

**AIR CONDITIONING Sales Engineer,** capable of making surveys, selecting equipment, estimating and selling self-contained and remote-type air conditioning systems, in Miami, Florida. Please write giving background, experience and qualifications. BOX 2678 Air Conditioning & Refrigeration News.

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**SEALED UNITS rebuilt**—prompt service on Coldspot (sealed and semi-sealed) Westinghouse, Crosley, Philco, Tecumseh, Mayflower, Kelvinator & etc. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Michigan.

**NEW GENERAL Electric motors, 1 1/2 HP.** 1800 R.P.M. 230 volts 1 Ph. 60 cycle. Constant duty sleeve bearing. List \$88 less 20%. Also in stock 1/2 to 1 HP. EDISON COOLING CORP., 310 East 149th St., New York City, N. Y.

**JAMISON DOORS new 6" double seal** standard infitting 2 1/2 x 6 ft. clear opening. Each original crate contains all: 3 hinges and heavy latch, gaskets, 2 vestibule doors also attached to frame, sill. Galvanized clad. \$49.00 @ FAIRBANKS, 145-03 7th Avenue, Whitestone, New York.

**QUALITY BOBTAIL fountains;** reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

**SERVICEMEN**—We have a complete rebuilding service on Coldspot, Westinghouse and open type compressors. Special price on semi-hermetic Coldspots \$25. Full hermetic \$45. Most units and compressors shipped back next day. All units must be crated and shipped prepaid. GENERAL REFRIGERATION MAINTENANCE CO., 3550 West 50th St., Cleveland, Ohio. Olympic 1877.

**SACRIFICE:** 10—2500 CFM. H. S. American Blowers direct connected to 220v., 3 phase, 60 cycle motors, 1140 RPM. Complete with magnetic switches. Top, hor. discharge backward curved 33" wheel. \$350 each. Guaranteed reconditioned government surplus. Also new Schnacke compressors 15, 20, 25 HP. (no motors) \$1039.50 each. Wire or write J. HERMAN CO., INC., 2410 So. Main Street, Los Angeles, California.

**REFRIGERATION UNIT, G. E., 2 stage** conated, to 50° below zero centigrade. New, very reasonable. FOB Philadelphia, Pa. Motors, 1/2 HP., 115 V.A.C., 3 phase, completely enclosed. New. FOB Philadelphia, Pa. C. LIEBERMAN, 5412 Woodbine Ave., Philadelphia 31, Pa. or call Trinity 7-8234.

**JACK & HEINTZ fractional horsepower motors.** Complete line of various sizes: 1/8, 1/4, 1/2, 3/4, 1-110/220 AC 60 cycles; 115/230 AC, 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., S. J. O'BRIEN SALES CORP., 500 West 34th Street, New York 1, N. Y. Telephone WI 7-2100.

**SACRIFICING BRAND**—new Copeland, Curtis and other top brands. Condensing units in original crates. 1/2, 3/4, 1, 1 1/2 HP. air-cooled. 1 1/2 and 3 HP. water-cooled. All priced for immediate clearance. Write or wire now. ROCHELLE REFRIGERATION COMPANY, 31 East 4th Street, New York 3, N. Y.

**SEALED CROSLY TERMINALS.** Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$5.25 (Part No. 1020) Installation tool 20¢. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

### FRANCHISES WANTED

**DEALER IN refrigeration appliances** currently operating well equipped workshop and maintaining trained staff desires exclusive Netherlands agency for established American refrigeration manufacturer. Apply to: Fa P.H.v.d.Ven, Kleverlaan 7, Haarlem.

### BUSINESS OPPORTUNITIES

**FOR SALE:** Refrigeration and store fixture business, established for thirty years in Southwestern New York and Northwestern Pennsylvania. Net earnings over \$20,000.00 in 1947. Valuable franchises. Reason retiring from business. BOX 2655 Air Conditioning & Refrigeration News.

**FOR SALE:** Commercial refrigeration sales and service business. Plenty household service. Two well known lines of equipment. Large trade area. Your chance to live in the Southwest. Excellent year round climate. Good schools—college. Inventory and equipment approximately \$5500. Reason for leaving other interests. Address BOX 2672 Air Conditioning & Refrigeration News.

### MISCELLANEOUS

**CHROME PLATING and refinishing** of refrigerator trays and hardware. All metal parts made "just like new." Quick service; reasonable prices. Ask for quotations and literature. MASTER SILVERPLATERS, 2031 Caniff Avenue, Dept. 29, Detroit 12, Michigan.

### FRANCHISES AVAILABLE

**DEALERS AND representatives** wanted to sell complete line of modern florist refrigerators and allied products of nationally advertised manufacturer of this type cabinets. Shipments from stock or within 20 days. Write BOX 2679 Air Conditioning & Refrigeration News.

## MEN TO GROW



with you

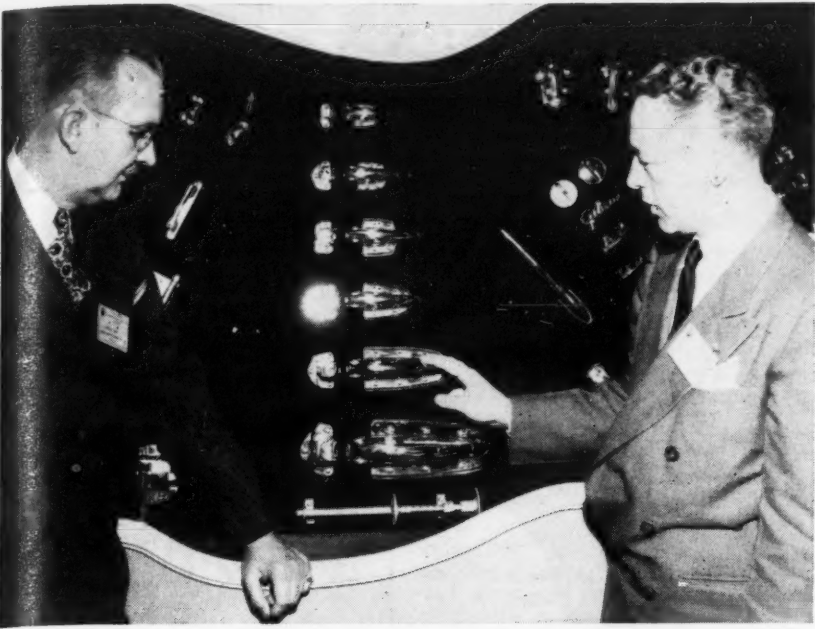
These men will develop rapidly—help you build your business. Let us know the type and kind of men you want. Men available for all parts of country. Let us send you well trained, energetic young men to help you with your sales, installation and servicing problems.

These men have had thorough practical shop training by refrigeration men with years of field experience.

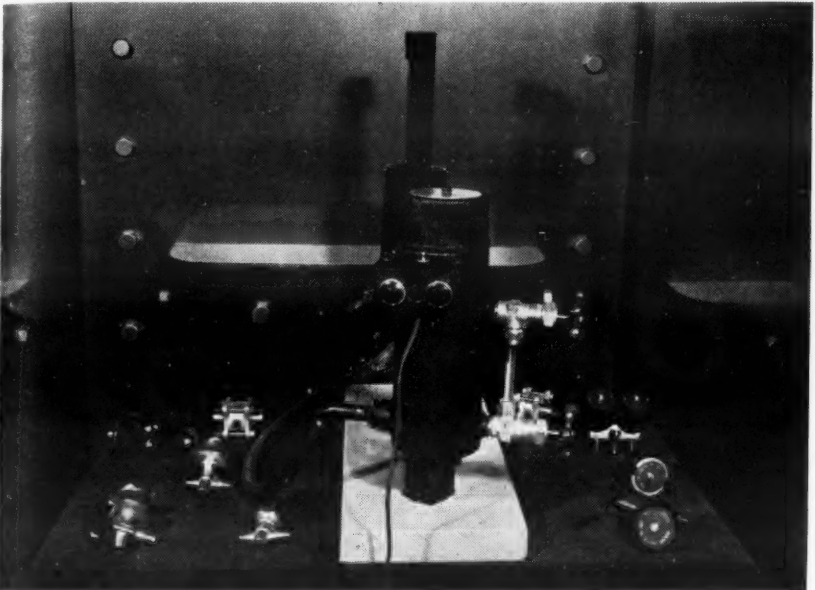
**THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, Inc.**

6767 Southwest St. Louis 17, Mo.

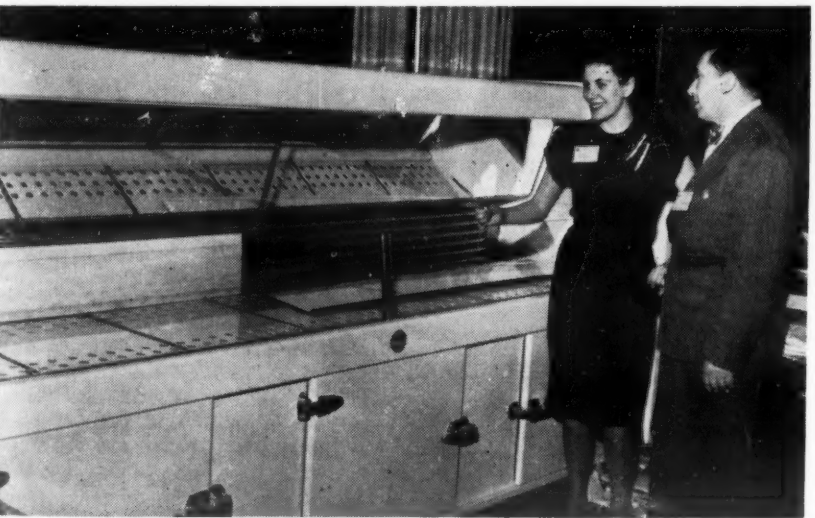




Cabinet hardware and locks for all types of refrigerators were shown by Grand Rapids Brass. G. H. DeGraaf (right), sales manager, shows a new walk-in cooler to Otto M. Wenk of Chicago.



New products of the Henry Valve Co. are grouped on this table. Tall item with the "eyes" is the new liquid level control. To the left, from front to rear, are a push button valve, two pressure regulating valves, a beverage vending machine solenoid valve, and a flanged coupling valve. To right of liquid level control are a vending machine solenoid valve, a carbonated water metering valve, another vending machine solenoid valve, and a flanged coupling valve.



Lucy Goodman and Sam Litt, Cleveland Refrigerator Co. sales manager, with the firm's new 10-ft. self-serve refrigerated meat case.

## Refrigerator, Freezer Sales Drop In Chattanooga

CHATTANOOGA, Tenn.—Sales of both domestic and commercial refrigeration equipment here during December slumped considerably below the November level, figures released by the Electrical Power Board of Chattanooga have revealed.

Other major appliances, generally, showed sales increases.

Sales of domestic refrigerators dropped about 12% from the previous month and freezer sales were slashed by one-third. In the commercial field, only two air conditioning units were sold during December. Commercial refrigerator sales dropped nearly 40%, and beverage coolers nearly 25%. Only freezing cabinets showed a sales gain, rising from three to six units.

On the other hand, vacuum cleaners showed a sharp rise in sales, as did clothes washers and ironers. Range sales mounted by eight units, and clothes dryers by one. Water heaters showed no gain, while dishwashers dropped one.

The sales report for December shows:

Appliance	No. of Units	Average Unit Price	Total Sales Value
Refrigerators	306	\$ 265.02	\$ 81,094.62
Home Freezers	19	377.82	7,178.50
Ranges	421	243.88	102,677.43
Water Heaters	192	124.87	23,974.59
Ironers	95	163.60	15,541.90
Vacuum Cleaners	307	80.33	24,660.65
Clothes Washers	474	169.79	80,479.02
Clothes Dryers	14	214.46	3,002.50
Dishwashers	7	306.70	2,146.93
Air Conditioning Units	2	1,212.50	2,425.00
Commercial Refrigerators	11	734.27	8,077.00
Freezing Cabinets	6	256.76	1,540.56
Beverage Coolers	41	352.50	14,452.61
Ice Makers			
Water Coolers	1	1,100.00	1,100.00

## Bids Open for Cooling Nursery at Oak Ridge

OAK RIDGE, Tenn.—A call for bids to install an air conditioning system in the nursery of the Oak Ridge hospital has been issued by the Roane-Anderson Co. here, acting as agents for the U. S. Government.

Bids will be received until 2 p.m. March 2, 1948 and then will be publicly opened. One hundred and fifty calendar days will be allowed for the completion of the work.

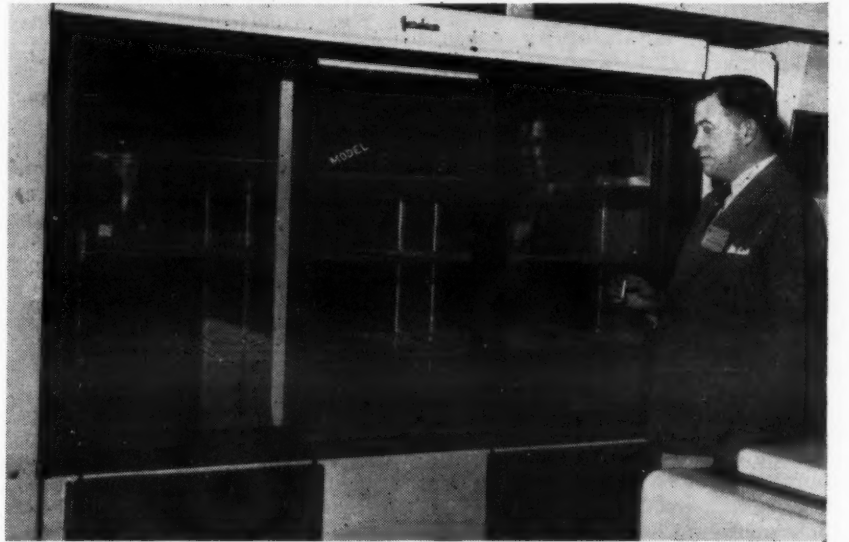
The job is described by Roane-Anderson as furnishing all labor, tools, equipment and materials, and performing all work required to complete the installation in the nursery.

Floor space involved, approximately 900 sq. ft. Condensing unit must be a York model 100HW "Freon" water-cooled unit or its approved equal. The air conditioner itself must be a York model CV-49F or its approved equal. The existing air conditioning system must be removed and salvaged for storage or disposal as directed.

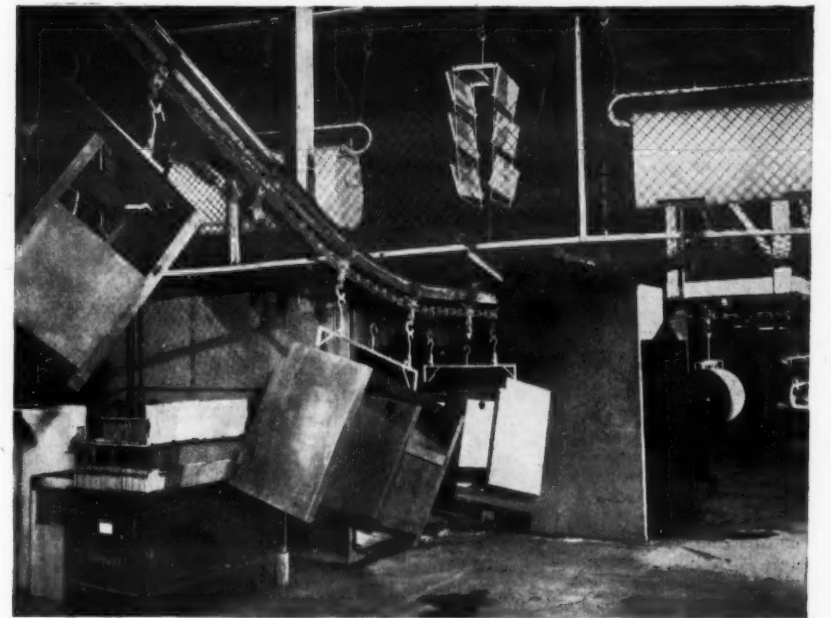
Requests for plans and specifications should be made to Roane-Anderson Co. Attention: Purchasing department, Section F.F., P. O. Box 456, Oak Ridge, Tenn. and accompanied by a \$10 certified deposit.



Improved model of the Bush low-temperature electric defrost system now permits automatic operation if desired. It can be supplied with an interval timer for four 6-hour periods, or two 12-hour periods. Heating elements can also be provided for drain pan or drain lines. Here P. E. Thimmes, Lancaster, Ohio, leans on a unit cooler designed for the electric defrost system while R. E. Kenney, Minneapolis representative, explains control system.



One featured model in the Jordan Refrigerator Co. line is this 8-ft. reach-in wall display case featuring a free-flow air circulating system. Jim Bertha from Texas looks it over.



Cleaned and phosphate-coated with "Duridine", these sheet steel range shells have acquired a thin, light, hard, crystalline phosphate coating—the ideal preparation for long finish life and enduring beauty. Photograph by courtesy of Halpoint, Inc.

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## Trade Practices Hit --

(Concluded from Page 1, Column 4)  
were: George B. Herman of Baltimore, retiring president; H. B. Adams of Tampa, Fla., retiring vice president; A. J. Edmundson of Raleigh, N. C., retiring secretary; Harry A. Hattenbach of Cleveland, retiring treasurer; Zach O. Jennings, of Little Rock, Ark., re-elected; and Clifton S. White of Cincinnati, re-elected.

Directors chosen for two year terms were: George Lipack of New York City, Russell Maintain of Boston, E. E. Wilson of Portland, Ore., A. E. Willey of Philadelphia, I. Rosenberg, Jr., of Pittsburgh, and R. D. Thrush of Charleston, W. Va. The suggested program, offered to the board of directors at its annual meeting by R. H. Muehlberg, executive secretary of the association, was described by Muehlberg as one "so designed that it will cement relationships between all persons or groups whether engaged in the manufacture, sale, or use of commercial refrigerator equipment."

He said that a "careful study of the sales, competitive, and trade problems confronting today's distributor of commercial refrigerator equipment" made during the past five months classified these problems into the following categories:

- Unfair competition between distributors
- Unfair trade practices between manufacturers and their distributors
- Unfair competition between wholesalers and distributors
- Unfair competition between so-called "direct factory representatives" and "dummy" distributorships

## NCRSA Appointed Them Leaders



First post-election shot of the new NCRSA officers shows W. C. Bader (center), president. At left is I. W. Shell, vice president, and at right, Charles Q. Sherman, secretary-treasurer.

refrigerator equipment in protected territories of the distributor.

He suggested that the facts concerning these practices "be used as a measuring stick for the guidance of the officers and members of the NCRSA in planning a national campaign for the eventual elimination of such unfair competition and unfair trade practices."

"It is imperative that all distributors realize the necessity of organizing solidly into an influential group . . . in an 'all out' effort to control, from the standpoint of the distributor, such practices which affect him directly as an authorized sales agent, in a given territory, of commercial refrigerator equipment."

Muehlberg further suggested that, starting March 1, 1948, a monthly questionnaire be sent from the association's national office to all members designed to obtain statistical information which can be written into news bulletins.

As a further step in determining better policies of operation, he recommended the formation of a trade

relations committee to contact similar committees in other organizations touching on the commercial refrigerator field and discuss with them fair trade practices, better methods of marketing equipment, and additional methods for use of equipment, by continuous research in the refrigeration field.

Muehlberg's program also posed the question of having the association hold a national exposition of commercial refrigerator equipment, combined with a food clinic, for commercial refrigerator distributors and the public.

## G-E Names Ledin Great Lakes Appliance Service Agent

CLEVELAND—Charles C. Ledin has been appointed General Electric appliance service representative in the Great Lakes District, announces W. C. Noll, manager of the technical and educational sections of the company's product service division.

## Every One in the Industry Should READ . . .



THE LAUGH - LEARN - PROFIT BOOK  
by GEORGE F. TAUBENECK

## ... Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"This is a funny book," declares George Taubeneck, editor of *Air Conditioning & Refrigeration News*, in his heading for Chapter 1. That's true. You'll laugh! You'll learn, too.

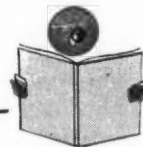
"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience

have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.



## CHAPTER TITLES from "One Foot in the Door"

- |   |  |
|---|--|
| 1. "This Is a Funny Book"                               | 12. "It Pays for Itself"                                   |
| 2. The Old Master—and How He Got That Way               | 13. Ask the Man Who Uses One                               |
| 3. Making Direct-Mail Advertising Respectable           | 14. Everybody Loves a Convention                           |
| 4. Hair Grows on a Billiard Ball                        | 15. Sales Training Schools Must Be Clever and Entertaining |
| 5. Publicity Isn't Always Free                          | 16. Circuit Riding Becomes a Profession                    |
| 6. People See Better Than They Hear                     | 17. Make It Clear, Make It Simple, Make It Direct          |
| 7. How to Humanize Your Company                         | 18. Just a Minute, Dear                                    |
| 8. Tom Thumb Cartels                                    | 19. Five Will Get You Ten                                  |
| 9. Finding the Rainbow's Pot-of-Gold                    | 20. Mama Can Help, Too                                     |
| 10. There's Always One Best Way to Tell Your Story      | 21. Ask the Man Who Does the Work                          |
| 11. You Can't Get Off First Base Without a Sales Manual | 22. Factory Open House Policy                              |
|   | 23. Who Says You Can't Sell Abroad?                        |
|   | 24. "Tell All" Promotion Rings the Bell                    |

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